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Transition and Continuation

During its ten years of publication this *Journal* has grown both in quality and in circulation. Much of this growth has been due to the efforts of our retiring editor, C. Gilbert Wrenn. My recent experience in processing manuscripts gives me a particular appreciation for his editorial work. Current correspondence files show that many contributors have thanked him for suggestions which tightened or otherwise improved an article. In brief, under his stewardship this *Journal* has made a distinct contribution to the development of counseling psychology.

A new editor has certain responsibilities (although in humility he must recognize his job as one of midwifery rather than one of parental or other "relative" responsibility). Present strengths of the journal will be continued, but attention will be given to changes which reflect or facilitate developments in counseling psychology. Editorially the journal benefits from having Donald Super and Leona Tyler continue as associate editors. Consulting editors, appointed to staggered three-year terms, provide for continuity and gradual change. This year Bill Snyder and David Tiedemann finish six years of service (the maximum permitted); their helpful evaluations have been much appreciated. Ralph Berdie and John Krumboltz have accepted consulting editorships; they bring helpful competencies and viewpoints to our staff. Section editorships (Book Review, Research Frontier, and Test Review) will continue the same except for replacing Don Super and Harold Pepinsky who asked for relief after long service. We are pleased to announce that Gilbert Wrenn will provide a statesman's view in the Book Review and Passing Scene section and that John Muthard will assist with the Research Frontier section.

In many respects a journal is a product of the manuscripts submitted. As in the past, topics considered relevant to the journal (and counseling psychology) will be broadly interpreted. Space limitations cause some difficulty, i.e., less than one-third of articles submitted can be accepted, but selection will be in terms of quality and the challenging nature of ideas presented.

Other sources of help are needed for continued growth of a journal. Participation in Division 17's Greyston Conference this month should indicate directions which counseling psychology is taking. Suggestions from readers as to preferred aspects, new emphases, changed format, etc. are welcomed. While a dedicated group (see inside back cover) started this journal over a decade ago, contact with the newer generation and its work must be maintained.

Two changes are occurring in the journal although possibly not immediately noted. This first issue of volume eleven is published a month earlier than usual. This will be pleasing to its contributors, but the move was particularly made to allay the worries of new subscribers who in the past sometimes wrote to the Business Office asking about their first issue when in fact it was not to be mailed until March 15. The second change which has been more gradual is a reduction in publication lag. The average time lag between date of receipt and publication is now down to about ten months; a recent publication indicates that the typical lag in APA journals is about one year. Further reduction will be tried, but this becomes difficult because of the time needed for evaluating manuscripts, obtaining revisions, preparing copy, printing, etc. Nonetheless, we will continue to work on this aspect of information retrieval.

An Inventory to Measure the Parental Attitude Variables in Roe's Theory of Vocational Choice

Richard J. Brunkan and John O. Crites
University of Iowa

Counselors have long been aware of the influence of the parents upon a client's vocational decision-making. Roe's recently formulated hypotheses on the relation of parental attitudes to choice has heightened interest in the problem and has stimulated considerable research. Most of the findings have been negative, however, and the question has arisen as to why Roe's predictions have not been substantiated. One of the most reasonable explanations is that the measuring instruments used to assess parental attitudes have been unreliable and/or invalid. The present investigation was conducted to develop a more adequate measure to test Roe's hypotheses and to study other problems which involve family relationships. Preliminary results on the *Family Relations Inventory* indicate that it has promise for research purposes and possibly for use in counseling.

Although counselors infrequently have an opportunity to interview the parents of their clients, particularly in the college or university setting, they are often acutely aware of the sometimes direct, sometimes subtle, influences which the family exerts upon the decision-making and development of young people. Williamson and Darley (1937) early recognized the impact which parental dominance may have upon vocational choice and outlined procedures for dealing with it in the counseling situation. In an analysis of the origins of unrealistic occupational goals, Korner (1946) identified various ways in which pressures by the family result in career decisions which the client cannot reasonably expect to implement. Among these are the parents' demands to achieve a higher status, to fulfill their thwarted ambitions and aspirations, and to enter the family business or profession. Ginzberg, Ginsburg, Axelrad, and Herma (1951) have also emphasized the critical role which "key persons," especially the parents, play in facilitating or hindering the process of vocational development during the adolescent years. Only recently,

however, has Roe (1957) formulated explicit hypotheses about the relationship of parental attitudes to the selection of an occupation which can be tested and which have promise for use in counseling.

In her theory of vocational choice, Roe proposes that the major variable in the selection of an occupation is the family atmosphere which an individual experiences during his childhood and early adolescence. As a result of the attitudes which his parents express toward him, the individual develops certain orientations toward the environment and the people in it which directly influence the vocational preferences he forms and the vocational decisions he makes. According to Roe (1957), there are three basic parental attitudes which affect an individual's vocational choice: acceptance, concentration, and avoidance. *Acceptance* means that the parents regard the child as a full-fledged member of the family, who needs a certain degree of independence and who has the capacity to assume responsibility. Accepting parents neither concentrate their attention upon their children nor overlook them. Either

casually or affectionately, they encourage them to fulfill their potentialities as best they can. *Concentration* refers to the attitude of parents who devote a disproportionate amount of their time and energy to the direction and control of their children. They overprotect them through restrictions upon their efforts to explore the environment and to meet others, or they place heavy demands upon them to perform beyond their capacities and to achieve ambitious goals. Finally, *avoidance* characterizes the disposition of parents who either neglect or reject the child. They withdraw when their child approaches them for affection and love; they spend as little time as possible with the child; they fail to satisfy the child's physical needs; or, they openly abuse or berate the child. In short, they manifest no positive interest in the child or his activities; at best, the child is only tolerated.

Problem

To test Roe's theory of vocational choice, several investigators have developed measures or ratings of parental acceptance, concentration, and avoidance, but none of the techniques or procedures has acceptable reliability and validity. As a consequence, tests of Roe's hypotheses about parental attitudes in relation to choice, which have yielded largely negative results, are indeterminate; it is not known whether her theoretical predictions are invalid or whether the variables are inadequately defined and quantified. For example, Grigg (1959) used a 15-item questionnaire to compare a group of 24 graduate nurses, who were training for supervisory or teaching positions, with a group of 20 female graduate students, who were majoring in chemistry, physics, and mathematics. The items in his questionnaire were of the following type: I always felt as a child that I was:

- a. Very much loved and wanted by others.
- b. Pretty much on my own.
- c. Not well understood.

Grigg found that the responses of the nurses and students, which were rationally keyed to the various parental attitudes, were

quite similar. Only one item differentiated the two groups, and it concerned childhood interest in things and gadgets (preferred by the science majors) rather than familial interpersonal relationships. From his findings, Grigg concluded that Roe's hypothesis was false. Because he reports no reliability or validity data on his questionnaire, however, an equally acceptable conclusion is that he did not measure the parental attitude variables in Roe's theory and therefore did not test it.

Similarly, Hagen (1960) has attempted to evaluate Roe's theory, but also with measures of parental attitudes which have questionable objectivity and validity. He asked two judges to rate excerpts from the family histories of 245 participants in the Harvard Study of Adult Development. The family histories were compiled from various sources, including interviews with the subjects of the study, information gathered from their parents and other observers, and follow-up questionnaires after varying periods of time. Using these materials, the judges rated the subjects on family atmosphere (protecting, demanding, neglecting, etc.) and obtained agreement independently in 70 per cent of the cases, a fairly high proportion for a subjective measurement method. The shortcomings of this procedure, however, considerably outweigh its advantages. In the first place, it is a nonstandardized and hence largely unreplicable approach to the assessment of parental attitudes. It would be extremely difficult to obtain comparable family histories on another sample and to excerpt the same information for ratings as that used by Hagen. And, in the second place, the only evidence of the validity of the judges' ratings is their agreement with each other. It is quite possible that their judgments would not correlate with more direct, behavioral criteria of parental attitudes.

In a study of social workers, occupational therapists, dietitians, and laboratory technicians, Utton (1962) gathered data on recalled parental attitudes with a modification of five rating scales devised by Champney (1941) as part of the Fels Institute

research on family relationships. Called the Childhood Experience Rating Scale (CERS), Utton's instrument purports to measure (1) parental acceptance, (2) direction of criticism, (3) child-centeredness, (4) rapport, and (5) affectionateness. The respondent is asked to indicate whether statements like the following are "more true than false" or "more false than true"

You were clearly accepted by your parents.
They included you in family discussions,
activities, and trips.

The number of items in each of the scales varies from 5 to 7, and the score on a scale is a rationally determined weighted average of the "true" responses. Like the other measures of parental attitudes, however, the CERS lacks empirical data on its reliability and validity and consequently has doubtful usefulness for tests of Roe's theory of vocational choice.

Finally, Switzer, Grigg, Miller, and Young (1962) have constructed a 50-item questionnaire to measure the overdemanding and rejecting attitudes in Roe's framework. These investigators report reasonably high split-half reliabilities for the two scales, the coefficients being .91 for overdemandingness and .81 for rejection, but they also note that the scales intercorrelate .63. Aside from the fact that the scales have a considerable amount of common variance, which raises a question about which attitude they are measuring, they assess only two of the six variables defined by Roe and consequently can be used to test only selected aspects of her theory.

Construction of the Family Relations Inventory

Previous research on the measurement of parental attitudes clearly indicates the need for a systematically developed and thoroughly studied instrument for evaluations of Roe's hypotheses. To provide such an instrument, the present study began with the construction of inventory items based upon Roe's (1957) definitions of each parental attitude (Flanagan, 1951; Jessor & Hammond, 1957; Travers, 1951). In her theory, Roe (1957, p. 214) states that "It

is impossible here to discuss the relative effect of maternal and paternal attitudes, of similarities or differences in them. The classification used here [i.e., acceptance, concentration, and avoidance] refers to the dominant pattern in the home, whether shown by one or both parents." Rather than to assume, as Roe does, that combined parental attitudes are the significant variables in vocational choice, it was decided to measure each parent's attitude separately, so that if they have differential effects upon decision-making these could be assessed empirically (Switzer, *et al.*, 1962). Consequently, both "mother" and "father" items, such as the following, were written:

Acceptance. "My mother gave me encouragement when I needed it most" and "I felt that my father understood me."

Concentration. "My mother would get very upset when I did not come home right after school" and "My father often expected me to do more than I thought I could."

Avoidance. "If I kissed or hugged my mother, she seemed to be embarrassed" and "My father spent very little time with me when I was growing up."

Every effort was made to keep the content of the items general enough, so that they would apply to both males and females, and to write items which referred to specific parental behaviors rather than global impressions of the family, as elicited by some of the other inventories. In all, 313 items were constructed for the preliminary research on what we have called the *Family Relations Inventory* (FRI).

To evaluate the content validity of the items and to assign them to scales for each parental attitude, they were given to three judges, two clinical psychologists and one counseling psychologist,¹ to classify into one of four categories: acceptance, concentration, avoidance, and questionable. The judges were instructed that a "yes" or "true" response to an item would be indicative of the attitude it expressed and that the "mother" and "father" items should

¹The authors are grateful to Drs. Leonard D. Goodstein, Alfred B. Heilbrun, Jr., and Peter P. Rempel for their assistance in judging the items.

Table 1

Critical Ratios of the Differences between Male and Female FRI Means for Two Samples

Variable	Means		Critical Ratio
	Male	Female	
Sample 1	(N = 47)	(N = 53)	
Mother Avoidance	4.49	3.42	1.27
Mother Acceptance	25.45	26.19	2.20*
Mother Concentration	7.62	8.92	1.57
Father Avoidance	7.23	5.25	1.64
Father Acceptance	25.79	26.11	0.24
Father Concentration	7.32	5.64	2.29*
Sample 2	(N = 81)	(N = 61)	
Mother Avoidance	4.12	3.74	0.55
Mother Acceptance	25.56	26.69	1.50
Mother Concentration	9.16	8.85	0.36
Father Avoidance	6.64	5.54	1.02
Father Acceptance	26.05	26.11	0.05
Father Concentration	6.93	6.93	0.00

*Significant at .05 level.

be sorted separately. Complete agreement among the three judges in classifying the items was reached on 187 from the original pool of 313. These 187 items were unevenly distributed, however, across the various scales, with the "father concentration" scale consisting of only 16 items. Consequently, to make this scale comparable to the others, 15 items on which only two judges agreed in their sortings were added to it. The final edition of the FRI contained, then, 202 items scored on six scales (mother acceptance, father acceptance, mother concentration, etc.) which varied in length from 30 to 37 items and which purported to measure the individual's perceptions of his parents' attitudes toward him in childhood and adolescence.²

Applicability

The emphasis in constructing the FRI was upon *perceived* parental attitudes, since Roe's theory implies that it is the individual's interpretation of his experiences with his mother and father, rather than

their actual behavior, which significantly influences his vocational choice. Furthermore, the experiences must include those of the high school years, since it is during this period that many important interactions with the parents transpire and crucial decisions about the selection of an occupation are made. The items in the FRI reflect this frame of reference and consequently are applicable to adolescents who have reached at least the ninth or tenth grade. Also, they are equally applicable to males and females. Table 1 presents the means and critical ratios for two samples ($N_s = 100$ and 142) of college males and females and reveals few differences between them. The possible exceptions are on the "mother acceptance" and "father concentration" scales, but these occur in only one of the samples and are at the .05 level of significance. Because the differences were slight, males and females were combined in all further analyses of the FRI scales.

The FRI was administered to 314 college students during its standardization, and the distributions of scores on the several scales provide a description of the ways in which young people perceive the attitudes of their parents. The data indicate that in this group there is a definite tendency to see both the mother and father as accepting rather

²Copies of the Family Relations Inventory are available from the authors upon request. Preliminary percentile norms for the Iowa sample of 314 Ss are also available as tentative guides to the interpretation of high and low scores on the FRI.

than concentrating or avoiding. This finding may be an artifact of the small number of Ss in the sample, which may be biased as a result, or of the unrepresentativeness of the sample, which was predominantly midwestern. Assuming some correspondence between Hagen's (1960) ratings of parental attitudes and the FRI scales, however, it is interesting to note that in his group of Harvard graduates, in contrast to the Iowa sample, the most frequently observed family atmosphere was "over-demanding concentration." The implication is that there may be institutional or sub-cultural differences in perceived parental attitudes and that local norms may be needed. Further work on the FRI should be directed toward establishing how generally applicable it is.

Internal Consistency and Reliability Estimates

To provide a check upon the judges' sorting of the FRI items, in addition to their agreement with each other, and to determine how homogeneous the scales were, internal consistency estimates for each of the six scales were computed. The data were obtained from a testing of 100 male and female Ss in an undergraduate psychology class and were analyzed in accordance with a procedure described by Guilford (1954, pp. 383-385) and Lindquist (1953, p. 366), which compares the corrected variance between subjects with their total variance on the scale. Table 2 presents the internal consistency estimates for the FRI scales derived in this manner. All

Table 2
Coefficients of Internal Consistency for the FRI Scales

(N = 100)	
Mother Avoidance	.82
Mother Acceptance	.83
Mother Concentration	.82
Father Avoidance	.92
Father Acceptance	.90
Father Concentration	.59

of the coefficients, with the exception of the one for "father concentration," are sufficiently high to conclude that the scales are unidimensional, i.e., the items measure essentially the same variable. The relatively low coefficient for the "father concentration" scale indicates that its items are not assessing the same response tendency and that it is probably factorially complex. It will be remembered that this scale contains some items which were agreed upon by only two of the three judges.

The test-retest reliability of the FRI was determined on a sample of 72 male and female college students who took the inventory twice with an intervening period of one month. As shown in Table 3, most of the coefficients are acceptably high, and some are exceptionally high. Two of the coefficients, however, for the Concentration scales, are considerably less than the others, although they compare favorably with the reliabilities of personality-type inventories in general. The means of the sample for the various scales changed very little over the test-retest period, none of the differences being significant, and the standard

Table 3
Test-Retest Reliability Coefficients and Mean Differences of the FRI Scales for a Period of One Month

Variable	(N = 72)				Coefficient of Correlation	Critical Ratio
	Test Mean	S.D.	Retest Mean	S.D.		
Mother Avoidance	5.04	5.52	5.03	5.55	.98	.009
Mother Acceptance	25.01	6.55	26.42	6.76	.90	.47
Mother Concentration	7.86	3.64	7.97	3.99	.80	.045
Father Avoidance	7.56	6.58	7.44	6.78	.97	.073
Father Acceptance	25.08	7.49	26.74	7.62	.93	.59
Father Concentration	7.07	2.84	7.30	3.09	.73	.011

deviations remained practically constant from one occasion to the other. Thus, the FRI appears to be as accurate as well as an internally consistent measuring instrument.

Validity Data on the
Family Relations Inventory

Intercorrelations of Scales

Theoretically, the parental attitudes of acceptance, concentration, and avoidance are largely distinct, although Roe (1957) points out that there are some relationships among them. She locates them on a circular continuum of "warm-cold" family relationships in the following order: casual acceptance — loving acceptance — overprotective concentration — overdemanding concentration — rejecting avoidance — neglecting avoidance — casual acceptance. In other words, the parental attitudes defined by Roe constitute what Guttman (1954) calls a "circumplex," in which related variables are ordered *around* their reference axes rather than *along* them. Given this conceptual framework, we would expect that, if the FRI measures of parental attitudes are valid, then their intercorrelations should be consistent with Roe's circumplex (Cron-

bach & Meehl, 1955). More specifically, we would predict that the acceptance and avoidance scales should be essentially uncorrelated with the others. The rationale for these predictions is that an attitude of acceptance precludes one of avoidance (and conversely), whereas an attitude of concentration does not necessarily imply either acceptance or avoidance (Symonds, 1939).

From an analysis of the scale intercorrelations presented in Table 4, which are based upon samples of college students and prison inmates, it is apparent that the findings support the predictions. For all of the samples, the intercorrelational pattern is practically identical: fairly high negative *rs* between the "acceptance" and "avoidance" scales, and nonsignificant *rs* between the "concentration" and other scales. Interestingly enough, these results agree not only with Roe's conceptualization but also with recent research from the California Growth Study (Schaefer, 1959; Schaefer & Bell, 1958; Schaefer, Bell, & Bayley, 1960). For example, Schaefer (1959) has reported a circumplex based upon factor and radex analyses of maternal behavior which has two dimensions quite

Table 4
Intercorrelations of the FRI Scales for Three Samples:
College 1 (N = 100), College 2 (N = 142), and Prison Inmates (N = 100)

Scale		2	3	4	5	6	Mean	S.D.
1. Mother	College 1	-.64	.08	.58	-.63	-.12	3.92	4.24
	College 2	-.54	.00	.54	-.31	.05	4.02	3.87
	Inmate	-.63	.06	.57	-.42	.06	6.47	5.68
2. Mother	College 1		-.30	-.47	.55	-.20	25.85	5.31
	College 2		-.28	-.34	.32	-.02	26.04	5.20
	Inmate		.08	-.28	.54	.18	23.69	5.83
3. Mother	College 1			.15	-.14	.49	8.31	4.16
	College 2			.18	.01	.45	8.96	4.90
	Inmate			.18	.22	.52	9.06	4.02
4. Father	College 1				-.83	.35	6.18	5.94
	College 2				-.78	.08	6.17	6.32
	Inmate				-.69	-.01	9.63	8.27
5. Father	College 1					-.21	25.96	6.44
	College 2					-.01	26.20	7.28
	Inmate					.28	23.58	7.73
6. Father	College 1						7.00	3.67
	College 2						6.93	3.32
	Inmate						8.26	3.46

Note—With N = 100, *r*'s of .16 and .23 are significant at the .05 and .01 levels, respectively.

similar to those in the present study: control-autonomy and love-hostility. The only difference between the two schema is that Schaefer's includes autonomy, which is not measured by the FRI. His control and love-hostility factors correspond closely to our concentration and acceptance-avoidance dimensions, respectively.

Correlations of Scales with Other Measures

The validation of an inventory by correlating it with other tests rests upon the assumption that the criterion measures themselves have been studied and validated. If they have not, as in the case of parental attitude inventories, then correlations of an unstudied instrument with them do not indicate *what* variables the new test measures but only whether it measures the *same* variables. Information about the latter, however, is valuable and contributes to an analysis of a test's validity, because it establishes the behavioral domain covered by a test and provides evidence on its internal structure. Also, correlations with other measures, even though they are empirically unvalidated, constitute data for inferences about the constructs which are defined by a test and can be used to formulate hypotheses for further research (Cronbach & Meehl, 1955).

Following this reasoning, the FRI was correlated with Grigg's (1959) questionnaire and Utton's (1960) rating scale, with the results shown in Table 5. Several conclusions from these correlations seem justified. First, Grigg's "rejection" scale corresponds to FRI "avoidance," but his "concentration" scale seems to measure a composite of FRI "acceptance" and "concentration." And, his "acceptance" scale looks like it assesses Schaefer's (1959) "autonomy" attitude rather than what its present name implies, since it correlates negatively with FRI "concentration." The intercorrelations of Grigg's scales, which show that acceptance (autonomy) is independent of rejection but negatively related to concentration, as would be required by Schaefer's circumplex, support these interpretations. Second, the positive and negative correlations of Utton's scales with FRI "acceptance" and "avoidance," respectively, suggest that his inventory is largely a measure of acceptance. This conclusion is supported by the nonsignificant correlations of Utton's scales with FRI "concentration" as well as their positive intercorrelations. Thus, on the basis of its relationships to the other inventories, and in contrast to them, it would appear that the FRI measures all of the parental attitude constructs

Table 5
Product Moment Correlations of FRI Scales with Grigg's Questionnaire and Utton's Rating Scale

Parental Attitude Scales	(N = 142)								Mean	S.D.
	Grigg's Questionnaire				Utton's Rating Scale					
	7	8	9	10	11	12	13	14		
1. Mother Avoidance	.54	.13	-.43	-.37	-.53	-.30	-.46	-.50	4.02	3.87
2. Mother Acceptance	-.56	.05	.28	.27	.56	.24	.38	.46	26.04	5.20
3. Mother Concentration	.16	-.43	.28	.11	.05	.03	-.03	.07	8.96	4.90
4. Father Avoidance	.58	.04	-.38	-.36	-.35	-.20	-.55	-.42	6.17	6.32
5. Father Acceptance	-.56	-.09	.41	.28	.33	.17	.55	.36	26.20	7.28
6. Father Concentration	.11	-.31	.22	.03	.00	-.03	.11	-.06	6.93	3.32
7. Rejection		-.13	-.47	-.49	-.49	-.11	-.53	-.50	0.97	1.00
8. Acceptance			-.80	.13	-.05	-.19	-.10	-.12	6.32	2.00
9. Concentration				.20	.33	.24	.41	.41	4.67	2.24
10. Acceptance					.31	.08	.37	.26	5.04	0.87
11. Direction of Criticism						.27	.48	.39	3.24	1.00
12. Child-Centeredness							.27	.17	3.56	1.73
13. Rapport								.43	4.44	1.00
14. Affectionateness									4.96	1.41

Note.—An r of .16 is significant at the .05 level, and an r of .21 is significant at the .01 level.

Table 6
Differences Between Students and Prison Inmates on the FRI Scales

Variable	Means		Critical Ratio
	Students (N = 100)	Inmates (N = 100)	
Mother Avoidance	3.92	6.47	-3.60**
Mother Acceptance	25.85	23.69	2.74**
Mother Concentration	8.31	9.06	-1.30
Father Avoidance	6.18	9.63	-3.39**
Father Acceptance	25.96	23.58	2.37*
Father Concentration	7.00	8.26	-2.50*

* significant at .05 level

** significant at .01 level

in Roe's theory and does so with scales which are relatively unitary in composition.

Group Comparisons

One way to establish the validity of a test is to show that it differentiates between two groups which differ on the variable supposedly measured by the test. With respect to parental attitudes, there is increasing evidence that the mothers and fathers of delinquents and criminals either neglect or reject their children. In a recent study by Glueck and Glueck (1959), for example, it was found that in 70 to 95 per cent of the families which produced delinquent boys (1) there was little family cohesiveness—lack of acceptance, (2) both parents were indifferent or hostile toward the child—avoidance, (3) the discipline of the father was overstrict or erratic—over-demanding concentration, and (4) the supervision by the mother was unsuitable—overprotective concentration. From these findings, we would expect that prison inmates would generally score higher than college students on the "avoidance" and "concentration" scales of the FRI, if it is a valid measure of these parental attitudes. The assumption underlying this expectation is, of course, that there is a positive relationship between perceived and actual family atmosphere.

The results reported in Table 6 largely confirm the predicted differences between the inmates and students. With the exception of their mean score on the "mother concentration" scale, which is in the right

direction but nonsignificant, the prisoners as a group scored higher on the "avoidance" and "concentration" scales and lower on the "acceptance" scales than did the students. It might be argued that these differences occur because the prisoners come from a lower socio-economic level than the students or are less intelligent and consequently answered the FRI in response to these factors rather than perceived parental attitudes. It is well-established, however, that these variables are all interrelated (Bayley & Schaefer, 1960; Eells, Davis, Havighurst, Herrick, & Tyler, 1951) and that a difference between groups on one implies differences on the others. Consequently, it seems reasonable to conclude that the prisoners' perception of their parents as relatively more rejecting and less accepting contributes to the validity of the FRI as a measure of these attitudes.

Further Research

Additional normative and validity data on the FRI would be desirable, but the results obtained in this study indicate that it is probably ready for use in theoretical research, the most relevant of which would be tests of Roe's hypotheses about vocational choice. Other problems suggest themselves, however, such as the relationship of parental attitudes to problems in vocational choice. It may be that indecision and unrealism in the selection of an occupation, rather than kind of occupation chosen, are the aspects of vocational behavior which are most directly affected by the

familial psychological atmosphere. Hypotheses which might be tested are that (1) individuals who are undecided about their vocational goals come from families where the parents were primarily concentrating—overprotective or overdemanding and (2) individuals who are unrealistic in their occupational choices have experienced parental attitudes of avoidance—neglect or rejection.

Although the FRI was developed from Roe's theory, it would appear to have a more general applicability than just in studies of vocational decision-making. For example, it would be interesting to investigate the relationships between actual parent behavior, possibly as measured by the Fels rating scales (Baldwin, Kalhoun, & Breese, 1949), and perceived parental attitudes, as assessed by the FRI. Also, Singer (1955) has proposed several hypotheses about the associations among parental attitudes, parental identification, and ego development which could be tested with the FRI and other appropriate measures. Finally, it would be interesting to determine whether a client's perceptions of his parents change as a result of counseling or psychotherapy and what the direction of the change is if one occurs.

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Comment

The research directed toward the evaluation of Roe's conceptualization of vocational choice has disappointed many persons who regarded the hypotheses as the first promising and imaginative attempt to relate vocational choice to previous experience and behavior. Occupational psychology and personality theory have developed independently and Roe's effort to produce a marriage between personality development and vocational behavior appeared logical and fruitful.

As Brunkan and Crites indicate, the failures to date to support Roe's hypotheses have been attributed to both methodological inadequacies and theoretical invalidity. Roe's concepts of acceptance, concentration, and avoidance made "clinical" sense but they lacked empirical definition and mensuration. The authors attempt in this paper to further define the concepts and to develop observation methods which may provide opportunities for more acceptable tests of Roe's hypotheses.

The information reported suggests that the six scales are reliable and accurate and that they should provide more adequate means for studying the hypotheses than have previously used instruments. The validity of the scales as evaluated against parental and family behavior remains an important question in spite of the authors' statement that "It is the individual interpretation of his experiences with his mother

and father, rather than the actual behavior, which significantly influences his vocational choice." This assumption rightfully is an intriguing hypothesis but research could possibly show that how parents behave toward their children was only remotely related to how this behavior was perceived by the child, and that vocational behavior might possibly be more closely related to parental behavior than to child perception of such behavior.

What this means simply is that eventually if Roe's hypotheses are to be evaluated, research must show whether the scales, regardless of how they predict vocational choice, are related to parental behavior and attitudes.

The authors in their first paragraphs recognize sex differences but they have developed their instruments, after a certain point, by combining the sexes. Although this can be justified in this step of scale development, the actual application of the scales in research on vocational decisions most likely will have to take into account the differences in vocational motives found between men and women.

The scales as reported should be a significant contribution to occupational psychology and appear to be ready for use by psychologists attempting to explain vocational choice.

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Relationships Among Measures of Readiness for Vocational Planning¹

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As the first steps in a ten-year longitudinal study of career development, a multi-dimensional personal interview was administered to the same group of 110 boys and girls when they were in the eighth and the tenth grades. The analyses of internal correlations within the 1958 (8th grade) and 1961 (10th grade) Readiness for Vocational Planning (RVP) scales scores established the multivariate nature of the behavioral domain.

The 1961 responses were less homogeneous than those of 1958, and less dependent on verbal ability, which would seem to indicate that the responses were more discriminative at the more mature age. Sex differences in RVP did not dictate a separation of the sexes in the various analyses, although it was evident that with a much larger sample such separation would be required. RVP was not appreciably related to socio-economic level of family, but was related to socio-economic level of occupational choices.

Theories and researches on vocational development are likely to involve a concept of Readiness for Vocational Planning (RVP) and some procedure for measuring behavioral tendencies of youth which are believed to be indicators of the construct. In theories of vocational development RVP usually will be an important hypothetical mediating variable, while in associated researches measures of RVP usually will be expected to perform as significant predictors of vocational choices and other aspects of the development process called "career." The Career Pattern Study has already re-

searched a large number of possible indicators of an RVP-type construct, called Vocational Maturity, and on the basis of correlational and factor analyses has demonstrated the multi-dimensional nature of the behavioral domain involved (Super & Overstreet, 1960). An alternative definition of an RVP complex is described in this study.

In 1958 the senior author launched a ten-year longitudinal study of educational and vocational development of youth, which was designed to parallel the Career Pattern Study in some ways. The basic instrument in the early stages of the study was a structured interview administered twice to the subjects, with a two-and-a-half year interval, which was conceived as a method of measuring RVP. Internal correlation and factor analyses of responses to the interviews and analyses of some external correlates, reported in this study, justify some generalizations about the nature of the RVP complex.

¹This research was supported through the Cooperative Research Program of the Office of Education, U. S. Department of Health, Education, and Welfare. The senior author wishes to acknowledge his indebtedness to Professor Donald Super (1957, 1960), whose research provided the general model for the design of this longitudinal study, and who made available his interview schedule, from which some of the questions of the present interview were drawn. The computations were done at the Computation Center, Massachusetts Institute of Technology, Cambridge, Massachusetts.

Method

There were 41 questions, requiring about 40 minutes to administer, in the interview, which was conducted twice with all 56 boys and 54 girls of the sample.² The first time, in the fall of 1958, the subjects were beginning the eighth grade, and the second time, in the spring of 1961, they were finishing the tenth grade. A principal components analysis of the intercorrelations of the 41 items as responded to in 1958 indicated that the eight largest components could account for 45% of the total variance in the 41-dimensional space (factored with ones in the major diagonal of the correlation matrix), with the first eigenvalue emerging as 4.7 and the eighth eigenvalue as 1.6. All the eigenvalues greater than one, of which there were 17, accounted for 71% of the total variance. The multidimensionality of the response set was clearly established.

At this point a decision was made to score the interview into a set of eight variables defined by *a priori* logical considerations, rather than to rotate the principal components to a suitable structure. This decision is parallel to that made by the Career Pattern Study staff (Super & Overstreet, 1960), and is defended in terms of the meaningfulness of the *a priori* variables in the context of the current literature on vocational development. Considerable empirical evidence in favor of the decision is reported below.

The eight numerical variables scaled from the interview responses, which are considered to represent eight dimensions of a domain of RVP traits, are named and described as follows.

Factors in Curriculum Choice: awareness of relevant factors, including one's abilities, interests, and values and their relation to curriculum choice; curricula available; courses within curricula; the relation of curriculum choice to occupational choice.

Factors in Occupational Choice: awareness of relevant factors, including abilities, interests, values; educational requirements for choice; relation of specific high school courses to choice; accuracy of description of occupation.

Verbalized Strengths and Weaknesses: ability to verbalize appropriately the relation of personal strengths and weaknesses to educational and vocational choices.

Accuracy of Self Appraisal: comparisons of subject's estimates of his general scholastic ability, verbal ability, and quantitative ability with his actual attainments on scholastic aptitude tests, English grades, and mathematics grades.

Evidence for Self Rating: quality of evidence cited by subject in defense of his appraisal of his own abilities.

Interests: awareness of interests and their relation to occupational choices.

Values: awareness of values and their relation to occupational choices.

Independence of Choice: extent of subject's willingness to take personal responsibility for his choices.

Other variables considered in relation to the eight Readiness for Vocational Planning scores included sex, I.Q. as measured by the Otis Beta Form, socio-economic status as rated by Hamburger's revision of Warner's scale (Hamburger, 1957), and level of occupational choice stated in 1961 as rated by Hamburger's scale. The relationship of the RVP variables to high school curriculum choices is reported in the next paper in this issue.

Sample

The subjects were randomly sampled within eighth grade classes in junior high schools in five urban communities in eastern Massachusetts. The mean Otis I.Q. in the sample of 110 subjects was 107.9, with a range of 88 to 131. Ages in 1958 ranged from 144 to 190 months, with a mean of 160.1 months. Socio-economic status ratings indicated that all major occupational groups were included among the parents of the students in the sample, and there was a

²One student dropped out of school and, although he is still in the sample, he is not included in this analysis because most questions in the interview were not appropriate in his case.

Table 1
Intercorrelations Among RVP Variables: $p < .01$
1958 Correlations Above 1961 Correlations In Each Row

RVP Variables	II	III	IV	V	VI	VII	VIII
I Factors in Curriculum Choice	.47 .26	.41 .28	........	.36....	........	.45....	.34 .35
II Factors in Occupational Choice		.49 .33	........	.....26	.38 .33	.30 .41	.30
III Verbalized Strengths and Weaknesses			.... ....	.... ....	.33 .26	.39 .32	....
IV Accuracy of Self Appraisal				.... ....	.... ....	.... ....	.... .26
V Evidence for Self Ratings					.... ....	.30 .33	....
VI Interests						....	....
VII Values							.25
VIII Independence of Choice							....

tendency for the occupations to fall at the middle of the scale.

Results

1. *Internal Correlations, 1958 Data.* Inspection of Table 1 reveals that although there were quite a few statistically significant correlations among the eight RVP variables based on the 1958 interview data, the coefficients were uniformly low. In no case was there as much as a 25% informational overlap between two of the variables. However, it is apparent that four of the variables clustered, each having significant correlations with four or more other variables (Factors in Curriculum Choice, Factors in Occupational Choice, Verbalized Strengths and Weaknesses, Values), and the other four did not cluster (Accuracy of Self Rating, Interests, Independence of Choice, Evidence of Self Rating). A principal components analysis of the intercorrelations (with 1.0 in each diagonal element) produced three eigenvalues larger than 1.0, of which the largest was 2.8 (accounting for 36% of the trace of the correlation matrix, and thus 36% of the total test-space variance). The corresponding three components could absorb 62% of the total variance in the eight-dimensional RVP space. All eight scales loaded positively on the first component, with the four scales which were observed to cluster hav-

ing the highest loadings. The bipolar second component was dominated by a high positive loading on Accuracy of Self Appraisal, not a clustering variable. The third component was dominated by a high negative loading on Evidence for Self Rating and a moderate positive loading on Interests, both non-clustering scales. Thus, while there was an interesting cluster of four variables, it appeared that all eight variables contributed to the establishment of the RVP measurement space.

2. *Internal Correlations, 1961 Data.* The correlations were lower in 1961 than they were in 1958, and there were fewer which were statistically significant (Table 1). The three variables which did not cluster were repeaters in this respect (Accuracy of Self Appraisal, Evidence for Self Rating, Independence of Choice). A principal components analysis of the intercorrelations produced two eigenvalues larger than 1.0, of which the first was 2.4 (accounting for 30% of the trace). The two components absorbed 47% of the total variance in the RVP space. On the first component the three non-clustering scales had the low loadings, but on the second component they had the high loadings. Again, the non-clustering scales had an important role in defining the Readiness for Vocational Planning space.

3. *Correlations Between 1958 and 1961 Data.* Vocational development theory encourages rather contradictory expectations regarding the constancy of RVP measurements over time. On the one hand, traits involved in the domain of Readiness for Vocational Planning should represent relatively enduring characteristics of the behaviors of the subjects just to qualify as personality traits. Thus, there should be enough stability over time so that the multivariate distribution of individual differences found in 1961 is recognizably similar to that found in 1958. On the other hand, if vocational development is a developmental process which includes in its span the early years of adolescence, then there should be significant changes in the patterns of responses to interview questions which are RVP trait indicators over a two-and-a-half year interval beginning early in the eighth grade. Thus, there should be a demonstration of change as well as a demonstration of stability. It might be expected from theory that the centroid of the sample (the vector of RVP variable means) would shift over time in directions which could be construed as indicating increased readiness, while the dispersion (the matrix of RVP variances and covariances) would not change radically over time, indicating the desired stability of trait patterns of individuals within the sample. In other words, individual profile shapes should be relatively stable, but there should be a general shift toward greater maturity. Since the 1958 and 1961 data were derived from the

same sample of subjects and not from independent samples, the multivariate analysis of variance was not an appropriate design in this case. Canonical correlation was chosen as a method of analyzing the stability of the dispersion over time, and correlated-samples t-tests were employed in the analysis of changes in the means.

One-third of the cross-correlations between 1958 and 1961 RVP scale scores (see Table 2) reached the .05 level of significance ($r \geq .20$ in 22 out of 64 instances), but in no case was the correlation large, the largest being .36 between 1958 and 1961 Factors in Curriculum Choice scores. All but one of the significant coefficients were positive, the exception being a correlation of -.28 between 1958 Interest and 1961 Accuracy of Self Appraisal scores. The smallness of these coefficients is partly due to the unknown but presumably considerable unreliabilities of the scales. As is well known, empirical studies of the reliability of scores obtained from ratings of interview protocol material, involving human judges, are very costly. In the present research, an extensive effort was made to standardize the scoring procedure and some reliability study was done (Gribbons, 1963), providing indications of "adequate" reliabilities. It was decided to invest the modest support available in researching the construct and predictive validities of the instrument, with the thought that if sufficient evidence accumulated that some important dimensions of Readiness for Vocational Planning were scaled, a later effort

Table 2
Cross-Correlations Between
1958 and 1961 RVP Variables: $p \leq .05$

1958 RVP Variables	1961 RVP Variables							
	I	II	III	IV	V	VI	VII	VIII
I Factors in Curriculum Choice	.36	.22	....	....	.27	....	.27	.26
II Factors in Occupational Choice	.22	.29	....	....	....	....	.28	....
III Verbalized Strengths, Weakness	.26	.26	.22	....	.32	....	.28	....
IV Accuracy of Self Appraisal	....	....	....	....	....	....	....	.21
V Evidence for Self Ratings	....	....	....	....	....	....	....	....
VI Interests	....	....	....	....	....	....	....	....
VII Values	....	....	....	-.28	....	.25	.32	....
VIII Independence of Choice	....	....	....	....	.32	....	.23	....
	....	....	....	.20	.24	....	....	.29

to improve the standardization of the instrument and to make it available to other researchers might be warranted.

Canonical correlation analysis is a powerful tool capable of revealing the full extent of the interrelatedness of two sets of scores such as provided by the 1958 and 1961 data (Cooley & Lohnes, 1962). The first canonical correlation indicates the maximum correlation which can be obtained between optimally weighted linear functions of the two sets of scores. The second canonical correlation indicates the maximum correlation which can be obtained between another pair of optimal linear functions of the two sets of scores, subject to the restriction that the second pair of linear functions must be orthogonal to (uncorrelated with) the first pair. Thus, the second canonical correlation is based on overlapping information in the two sets of scores which was not used in the first canonical correlation. There is the possibility of fitting additional pairs of linear functions which will be orthogonal to all previous pairs and will be significantly correlated, but in the present case only two significant canonical correlations developed. Thus, the canonical correlation analysis produces an index to the amount of common variance shared by two sets of measurements (as the sum of the squared canonical correlation coefficients) and an indication of the number of orthogonal, or independent, dimensions of shared information (as the number of significant canonical correlation coefficients). The method

is a great boon to researchers studying relationships among sets of measurements when systematically low correlations between pairs of measures, one from each set, may mask the true extent of informational overlap, or common variance, present, as in this case. The reader who is meeting canonical correlation analysis for the first time may be assured there is no magic here. The method is rigorously derived by means of the differential calculus to locate weights for linear functions of each set of measurements such that the correlation of the linear functions will be a maximum, but the size of this maximum is strictly determined by the relationships existing in the data. The method reveals relationship and does not create it.

The first canonical correlation between the 1958 and 1961 RVP scale scores was .59 ($p < .001$), and the second was .48 ($p < .001$) (see Table 3). Considered together, these coefficients indicate that a total overlap in variances of 57% has been established between the two sets of scores, and seem to reflect a moderate but significant amount of stability in the RVP trait measurements. The largest contributor to the linear combinations for the first canonical correlation was Factors in Curriculum Choice, and the largest contributor to the combinations for the second canonical was Accuracy of Self Appraisal. Interestingly, Factors in Curriculum Choice, was the one variable that did not make a useful contribution to any of the linear combinations. Might this support the hy-

Table 3
Weights for Canonical Correlation Functions, 1958 vs. 1961 RVP

RVP Variables	First Function		Second Function	
	$R_c = .59$		$R_c = .48$	
	1958	1961	1958	1961
I Factors in Curriculum Choice	.54	.51	.04	.04
II Factors in Occupational Choice	.03	.04	-.15	.03
III Verbalized Strengths and Weaknesses	.33	-.13	.32	.28
IV Accuracy of Self Appraisal	.27	-.27	.45	.78
V Evidence for Self Ratings	-.14	.46	-.16	.29
VI Interests	.46	.22	-.82	-.24
VII Values	.20	.50	-.01	-.38
VIII Independence of Choice	.23	.37	.54	.13

pothesis that in the eighth grade the responses to these questions were based on a different process than in the tenth grade, perhaps fantasy in the former and realism in the latter?

The mean differences between 1958 and 1961 scores on corresponding RVP scales were all statistically significant, as indicated by correlated-samples *t*-tests ($p < .001$ in seven cases, $p < .05$ in the eighth). For all variables the 1961 means were higher than the 1958 means by a half to a full standard deviation, and it was assumed that these positive changes represented increases in readiness for planning, or vocational maturity in this life stage of early adolescence (Gribbons, 1963).

4. *External Correlations.* The relationships of RVP scores obtained in 1958 and in 1961 with external variables of Otis I.Q., sex, socio-economic status, and level of occupational choice have been studied.

Investigators employing structured interviews always have the fear that they are measuring verbal intelligence primarily. Fortunately this did not appear to be the case with the RVP scales. Only one of the 1958 score distributions displayed more than 10% common variance with the Otis I.Q. distribution (Evidence for Self Rating correlated .50 with Otis I.Q.) and none of the 1961 scores overlapped as much as 4% with Otis I.Q. The multiple correlation of Otis I.Q. with the eight RVP scales in 1958 was .57 ($p < .001$), but was determined primarily by the correlation with Evidence. The multiple correlation of Otis I.Q. with the eight RVP scales in 1961 was only .23 ($p > .05$). It seemed to make sense that when the subjects were younger their responses to the RVP items should have been more influenced by their verbal abilities than they were two-and-a-half years later, but even in 1958 this influence was not excessive.

A major difference between this longitudinal study and the Career Pattern Study (Super and Overstreet, 1960) is the inclusion of both sexes in the present sample. Developmental theory and education-

al practice contradict each other on this issue, since theory stresses sex differences and practice usually ignores them. In vocations sex differences are usually but not always strictly observed. The senior author recognized the risk involved in planning a two-sexes sample. Two multivariate analyses of variance were conducted to test the significances of the differences in centroids and dispersions between the sex groups in the RVP space in 1958 and in 1961. For the 1958 scores, Wilks' $\Lambda = .88$, $F_{8, 107} = 1.7$, $p \sim .10$, and for the 1961 scores $\Lambda = .87$, $F_{8, 107} = 2.0$, $.10 > p > .05$. These are ideal findings, because any personality inventory ought to tend to discriminate the sexes, as the RVP scales do, but it was not desirable to achieve significant discrimination which would force separate treatments of the sexes in all the other analyses, because of the sample size. Since the tendency to discriminate the sexes has not been found to be statistically significant, separate treatments are not necessary in this case. Presumably when similar research is done with much larger samples, the sexes will be treated separately.

It has been theorized that vocational development "is determined by the individual's parental socio-economic level," in part, (Super, *et al.*, 1957, p. 14). However, in these data the eight 1961 RVP scale scores were essentially uncorrelated with socio-economic level, the multiple correlation being only .24 ($p < .05$).

In 1958 and again in 1961 the subjects were asked to state occupational choices, and these were rated for socio-economic level. The correlation between the 1958 and 1961 level of occupational choice scores was .66, indicating moderate stability for this variable. The multiple correlation of the eight 1958 RVP scores with the 1958 level of occupational choice scores was .50 ($p < .001$), and the multiple correlation of the 1961 RVP scores with 1961 level of occupational choice scores was also .50. In both instances Factors in Curriculum Choice made the largest contribution to the prediction equation.

Discussion and Summary

The analyses of internal correlations within the 1958 and the 1961 Readiness for Vocational Planning scales scores established the multivariate nature of the behavioral domain, in that the principal components for the 41 questions in the RVP interview schedule provided a possible 17 independent dimensions in terms of which the items could have been combined, and the principal components of the arbitrarily (albeit logically) determined 8 RVP scales demonstrated very small variances for a general component of RVP. There is no question regarding the multidimensionality of the RVP measurement space established by the instrument. Many readers will question the choice of the particular 8 scales employed. The authors hasten to insert their own uncertainty about the wisdom of the choice, and to describe it as a provisional one. If further evidence of predictive validities accumulates (see next paper in this issue for a start), they intend to invest in an effort to improve the instrument and its scaling with the thought that an improved version of a Readiness for Vocational Planning interview (or possibly even a group-administered paper-and-pencil form) might be useful in counseling research and practice. In such an event a full-scale factor analysis, with rotation of axes in search of a structure, of the items is planned, and a different set of scales might be put forward. On the other hand, it is hoped that the reader will grant the logical attractiveness of the present set of scales. Until psychologists are willing to turn to strictly analytic solutions of the dimensional bases of our measurement spaces, subjective decisions derived from theoretical considerations interacting with statistical considerations will determine the choice of ways of combining items into scales.

The 1961 responses were less homogeneous than those of 1958, and less dependent on verbal ability, which would seem to indicate that the responses were more discriminative at the more mature age. Sex differences in RVP did not dictate

a separation of the sexes in the various analyses, although it was evident that with a much larger sample such separation would be required. RVP was not appreciably related to socio-economic level of family, but was related to socio-economic level of occupational choices.

The RVP score sets collected in 1958 and in 1961 overlapped with 57% shared variance, which to the authors seemed to warrant the hypothesis of a common behavioral domain, or common traits, measured twice over a long time interval, and the mean differences between the two sets seemed to warrant the hypothesis of a developmental process modifying the behavior traits over the interval. The differences were in directions assumed to indicate increased readiness for planning or vocational maturity.

Follow-up studies of these subjects will cast further light on the meaning and uses of the RVP measure. The present findings, especially as they are supportive of the similar findings of the Career Pattern Study (Super & Overstreet, 1960), may suggest that it would be valuable for school guidance counselors to collect RVP-type data in their contacts with adolescent clients, and to explore for themselves the relationships of such data to clients' problems and problem-solving processes.

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Validation of Vocational Planning Interview Scales¹

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The multi-dimensional personal interview administered to the same group of 110 boys and girls in the eighth and the tenth grades has demonstrated, under statistical analysis, its ability to separate these boys and girls into three curriculum groupings, and to predict with some validity as early as the eighth grade the curriculum in which a youngster will be in high school. Although there is a good deal of similarity among the curriculum groups, the College Preparatory group consistently demonstrated the highest Readiness for Vocational Planning (RVP) as measured by this instrument.

The discriminant analyses indicate that the ability to estimate accurately one's scholastic abilities and to cite the rationale for these estimates appear to distinguish those students in the College Preparatory and to indicate higher RVP as measured by this instrument.

In 1958 a ten-year longitudinal study of educational and vocational development was launched with the interviewing of 111² eighth grade boys and girls (Gibbons, 1960). Two years later the same interview schedule was used with the same subjects, who were then in the tenth grade. This interview schedule, then, bears a large burden in the design of the longitudinal study. It must yield substantial and important information about the status of development of the subjects in the early stages of the study to justify following

them through high school and out into life. When, as in this case, responses to an interview schedule have been coded quantitatively to produce a number of scales, the problem of whether useful questions have been posed is joined by the problem of whether useful dimensions, i.e., reliable and valid ones, have been established in the coding and collating of the responses. A demonstration of predictive validity of the interview scales relative to a criterion of importance in the educational and vocational development of the subjects would have value in two ways: first, it would be a significant research finding, and second, it would contribute to confidence in the interview scales. The hypothesis of this study is that the interview scales have predictive validity for the criterion of choice of high school curriculum.

¹This research was supported through the Cooperative Research Program of the Office of Education, U. S. Department of Health, Education, and Welfare. The senior author wishes to acknowledge his indebtedness to Professor Donald Super (1957, 1960), whose research provided the general model for the design of this longitudinal study, and who made available his interview schedule, from which some of the questions of the present interview were drawn. The computations were done at the Computation Center, Massachusetts Institute of Technology, Cambridge, Massachusetts.

²One student dropped out of school and, although he is still in the sample, he is not included in this analysis because most questions in the interview were not appropriate in his case.

The sample, method, and interview instrument are described by the authors in the preceding article, (Gibbons & Lohnes, 1964).

The criterion grouping of the 110 subjects resulted from their choices of high school curricula in the tenth grade. The

three groups were College Preparatory with subjects, Business with 31, and Industrial Arts and General with 18. Two multiple group discriminant analyses were computed; one employed the eight scores on the Readiness for Vocational Planning (RVP) variables collected in the eighth grade, before the choices were made by the subjects, the other employed the RVP variables scores collected in the tenth grade when the subjects had been in their chosen curricula for almost two academic years. It was expected that both analyses would lead to rejections of the null hypothesis that the three groups might represent random samples from a common multivariate population. That is, both the eighth grade and the tenth grade score sets were expected to provide bases for discrimination of the three curriculum groups. Since the subjects were two-and-a-half years older and had already made the choices in the tenth grade, it was also hypothesized that the tenth grade RVP scores would provide substantially better discrimination of the curriculum choices than did the eighth grade RVP scores. Thus, it was hypothesized that the F-ratio for the null hypothesis would be substantially larger in the analysis of the tenth grade RVP scores than in the analysis of the eighth grade scores. It was also anticipated that (1) the discriminant functions would indicate which of the eight RVP variables contributed heavily to the prediction of the criterion in each analysis, and (2) the most important contributors might vary between the two analyses.

In this type of experiment rejection of the null hypothesis is not very satisfying or informative. After a statistically significant discrimination is found, it is still of practical importance to know how good the separation of the groups is by the variables. One way to test this separation is to assign subjects to groups on the basis of their score profiles and the definitions of the group swarms afforded by the centroids and dispersions of the groups in the multivariate space in order to see how many correct classifications (hits) and incorrect ones (misses) occur. A table of such hits and misses provides for the statistical model a sort of batting average, which can tell a revealing story. To produce such tables, multivariate classification probabilities were computed on the basis of each of the two score sets according to the method described in W. W. Cooley and P. R. Lohnes (1962). Again, it was expected that the tenth grade RVP scores would produce a substantially better incidence of correct classification than the eighth grade scores.

Results

The multivariate analyses of variance yielded an F-ratio of 2.23 for the eighth grade RVP scores versus curriculum group, and an F-ratio of 2.34 for the tenth grade RVP scores versus the same curriculum. Both ratios had 16 and 214 degrees of freedom, and both indicated a probability of less than .01 for the null hypothesis. Thus, both sets of Readiness for Vocational Planning scores were shown to have pre-

Table 1
Scaled Discriminant Function Weights

RVP Variable	Eighth Grade Data		Tenth Grade Data	
	8thDF1	8thDF2	10thDF1	10thDF2
Factors in Curriculum Choice	6.	-6.	18.	3.
Factors in Occupational Choice	-6.	6.	-12.	18.
Verbalized Strengths and Weaknesses	6.	-9.	-8.	-2.
Accuracy of Self Appraisals	27.	36.	-18.	21.
Evidence for Self Ratings	51.	-16.	29.	30.
Interests	19.	-5.	11.	6.
Values	10.	22.	0.	9.
Independence of Choice	-2.	-5.	4.	0.

6.3.81

5691

dictive validity for the curriculum choice criterion, although unexpectedly the tenth grade F-ratio was not substantially larger than that for the eighth-grade data. It is interesting to note that the Wilks' Lambda for the eighth grade data was .735 and for the tenth grade data was .725, illustrating the close similarity of the outcomes.

Table 1 displays the discriminant function weights, scaled by a function of the variance of each score to show the relative contributions of the variable to the discrimination obtained by the function. In the eighth grade experiment, the first discriminant function (hereafter 8thDF1) accounted for 81% of the discriminating power of the battery, and the second function (hereafter 8thDF2) accounted for 19% of the discriminating power. In the tenth grade RVP space, the first function (hereafter 10thDF1) accounted for 76% of the discriminating power, and the second function (10thDF2) for 24%. Thus, in each experiment the first discriminant function has far greater importance than the second. It is noteworthy that the best predictor variable in each experiment is Evidence for Self Rating; the second best in each case is Accuracy of Self Appraisal; and the third best in the eighth grade RVP space is Interest, while the third best in the tenth grade RVP space is Factors in Curriculum Choice. Here is evidence of some stability in the operation of the interview variables at a two-and-a-half year interval.

Figure 1 shows the locations of the group centroids in the two-dimensional discrimi-

nant space for both experiments. The availability of this revealing figure is one of the important contributions of the discriminant analyses, for it is impossible to map the locations of the group centroids in the original eight-dimensional RVP space. The figure shows that both discriminant analyses produce approximately the same mapping of the groups, with the exception of the Industrial Arts and General group, which is more isolated in the eighth grade data than it is in the tenth grade data.

Table 2 reports the results of the multivariate classifications probabilities study. Each subject was assigned to the group for which he had the highest computed probability of membership. If that was his actual group, he was recorded as a hit; but if he actually belonged to another group, he became a miss. The table reveals a 7:4 hits:misses ratio in each experiment. Again it is seen that, contrary to hypothesis, the tenth grade RVP scores did not provide superior information for the prediction of curriculum choices to that provided by the eighth grade RVP scores.

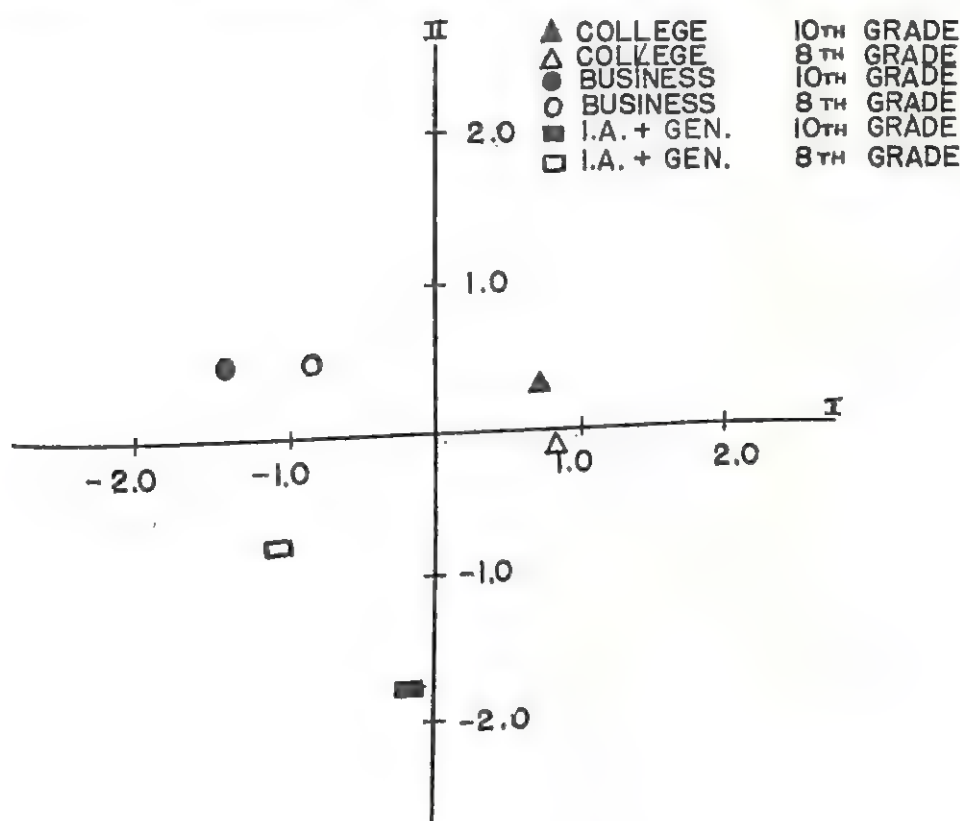
The strength of the information clearly lies in its capacity to identify potential or actual College Preparatory students. Only 10 of the 61 potential College Preparatory students in 1958 (eighth grade data) were misclassified, and only 6 of the actual College Preparatory students in 1961 (tenth grade data) were misses. The weakness of the information lies in its poor ability to classify the Business students, and in its total inability to classify Industrial Arts

Table 2
Classification from Membership Probabilities

Assigned Group	Actual Group Entered			
	College	Business	I. A. & Gen.	Total
College	51 (55)	14 (18)	12 (14)	77 (87)
Business	10 (5)	17 (13)	4 (3)	31 (21)
I. A. & Gen.	0 (1)	0 (0)	2 (1)	2 (2)
Total	61 (61)	31 (31)	18 (18)	
From eighth grade data: 70 hits, 40 misses.				
From tenth grade data: 69 hits, 41 misses.				

FIGURE 1
CENTROIDS IN DISCRIMINANT SPACE
BASED ON

SCORES ON EIGHT VARIABLES ON 10TH GRADE VS 10TH GRADE CURRICULUM
SCORES ON EIGHT VARIABLES ON 8TH GRADE VS 8TH GRADE CURRICULUM



STANDARD DEVIATION UNITS ALONG THE DISCRIMINANT AXES

Discussion

The predictive validity of the RVP variables against curriculum choice as a criterion has been established.

RVP variable scores collected early in the eighth grade appear to have as much predictive validity for curriculum choice as do scores on the same variables collected two-and-a-half years later, when the subjects are that much more mature and have already selected their curricula. This would

and General students. This weakness derives from a tendency of about half the Business students and most of the Industrial Arts and General students to describe themselves in the interviews in much the same terms employed by the College group. Unfortunately, this tendency is stronger in 1961, after curriculum choices, than it was in 1958 (26 misclassified as College on the basis of the 1958 data, and 32 so misclassified from the 1961 data).

seem to be evidence that the Readiness for Vocational Planning traits are well-defined and may be reliably estimated in the first semester of the eighth grade.

The discriminant analyses indicate that two of the eight RVP variables, Evidence for Self Ratings and Accuracy of Self Appraisal, contribute most heavily to the discriminating power of the RVP battery. This should point out to school personnel the urgent need for early assistance to youngsters in developing accurate perceptions of their abilities.

The classification studies indicate that the College Preparatory students possess excellent Readiness for Vocational Planning, in that their actual behavior (curriculum choice) corresponds almost perfectly with their RVP verbal behavior.

As previously reported (Gribbons & Lohnes, 1964), RVP performance is somewhat contaminated with verbal ability (about 32% of 8th grade RVP variance and about 5% of 10th grade RVP variance), and the best predictor, Evidence for Self Ratings, is the most contaminated of the RVP variables. This contamination helps to explain the greater predictability of the College Preparatory group membership, but it is not unexpected, excessive, or even unwanted. RVP scales totally uncorrelated with verbal ability would be difficult to understand, since any judgments of the degree of maturity of verbal performances should be somewhat correlated with the verbal abilities of the performers. This study was planned to explore the relationship of a set of scales purporting to measure aspects of Readiness for Vocational Planning, and known to be only modestly contaminated with verbal ability, to the exterior record of a concrete vocational act, the selection of a high school curriculum. Fortunately the RVP scales do not need to be as efficient predictors of curriculum choice as is verbal ability to justify themselves as measures of verbal correlates of vocational acts.

It is interesting to note that the average I. Q. of the subjects misclassified as College

Preparatory on the basis of tenth grade data is 105, suggesting that many of them could do College Preparatory work. However, the average socio-economic status of these subjects was 4+ (Hamburger, 1957), indicating lower-middle to lower socio-economic status, and suggesting a possible failure of the school and home to encourage these youngsters to make sufficiently ambitious curriculum choices.

Finally, the RVP variables have performed well enough in this study to warrant some optimism regarding their future performance as predictors in the ten year longitudinal study.

Summary

The multi-dimensional personal interview administered to 110 boys and girls in the eighth and the tenth grades has demonstrated, under statistical analysis, its ability to separate these boys and girls into three curricular groupings: College Preparatory, Business, and Industrial Arts and General; and to predict with some validity as early as the eighth grade the curriculum in which a youngster will be in high school. Although there is a good deal of similarity among the groups, the College Preparatory group consistently demonstrated the highest Readiness for Vocational Planning as measured by this instrument.

The discriminant analyses, which show the relative magnitude of the contributions of the variables measuring RVP, indicate that the ability to estimate accurately one's scholastic abilities and to cite the rationale for these estimates appear to distinguish those students in the College Preparatory and to indicate higher RVP as measured by this instrument. This should point out to school personnel the urgent need for early assistance to youngsters in developing accurate perceptions of their abilities, because youngsters are being forced to make pre-vocational choices as early as the eighth grade and it can be assumed that those who are most ready and able to make choices will make the wisest decisions.

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Comment on Two Articles

The measures of Readiness for Vocational Planning on which Gibbons and Lohnes report in this series of two articles, and on which Gibbons has reported in an earlier article, generally appear to resemble in substance the indices of vocational maturity which, in the Career Pattern Study work, seemed to have construct validity. These were identified, through factor analysis, as measures of planfulness, and like Gibbons' measures dealt with awareness of choices to be made, of factors to be considered in choosing, of acceptance of responsibility for planning and choosing, and the like. It is helpful to see, so soon after the appearance of the CPS work, a completely independent replication of important aspects of that study.

The very independence of Gibbons' work makes it especially important to consider similarities and differences in methods. The RVP Scales appear to put considerably more stress on aspects of self-knowledge than do the VM Indices; accuracy of self-knowledge is not measured as such in the Career Pattern Study, and as such in the Super and Overstreet monograph only in the Wisdom of Preference measures. It will be remembered that these indices did not correlate with the VM Indices which clustered in the anticipated manner, and were therefore rejected at the ninth grade level (they may prove better at the 12th grade, but that CPS study is not yet completed). CPS can of course try

some self-knowledge measures, but not in the precise form used in the Gibbons and Lohnes study. So far, at least, RVP and VM are very similar, as brought out in my opening paragraph, but there is this one important difference.

It is gratifying that the planning measures reported on in these studies prove to combine stability and change, stability of rank, that is, and change in level or amount. This is what one would expect in a developing characteristic (there is *no* inherent contradiction in stability and change when thus defined); that this is what is found should encourage further work in the measurement and predictive value of vocational maturity or planfulness.

It is noteworthy that the authors found that RVP bears a slight relationship to intelligence or to socioeconomic level, and that the correlations which they report are about the same as those reported in the second CPS monograph: for the latter variable they found a significant r of .24, Overstreet and I found one of .27.

In the second study we see some of the first evidence to become available on the predictive validity of RVP or VM. As the authors point out, the fact that 8th grade indices have about the same predictive value as 10th grade indices is encouraging. The inability of the scales to predict well for the non-college preparatory students might be distressing, were it not that the choice of these other curricula is in fact

often based on the exclusion of college rather than on the choice of business or industrial arts. But what is the relative predictive value of intelligence and RVP? This question is raised, but not clearly and objectively answered, by the authors. Perhaps it is not really important that they have not, for type of curriculum chosen does not seem to be an adequate criterion for a measure of planfulness; rather, let us hope that further work by these authors will deal with appropriateness and effectiveness, or outcome, criteria, while continuing their analyses of developmental trends.

Finally, the promise of a usable instrument for the assessment of RVP or VM is

cheering. A number of readers of the CPS monograph on vocational maturity have inquired about a measure that could be obtained by a working counselor, but of course the CPS indices are too clumsy for practical purposes. As the work of that project continues to focus on the course and determinants of career development, rather than on the development of usable instruments, it is to be hoped that independent researchers like Gribbons, or former CPS staff members like John Crites (who also has been working on a VM Inventory), will devote some energy to making into useful tools what are still just research instruments.

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The Development and Validation of an Indecision Scale: The Natural History of a Problem in Basic Research¹

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American College Testing Program

Robert C. Nichols

National Merit Scholarship Corporation

A 15 item Indecision Scale was empirically derived to understand the process of decision. The Indecision Scale was found to have substantial construct validity by virtue of its relationship with personality and interest inventories, self-ratings and life goals, and various achievements. When the Indecision Scale was applied to a cross-validation sample, it was also found to have predictive validity over a one-year interval for change in major field. Results lend support to decision theory emphasizing the importance of personality and interest variables. The Indecision Scale is also positively associated with both the potential for and performance of creative work, especially in the arts.

The ability to make satisfying and "good" decisions within a brief period of time is commonly assumed to be a sign of personal effectiveness. Among the many decisions confronting most people is the necessity to make a decision about the vocation they will follow.

The present study is an attempt to comprehend some of the personal attributes which contribute to a student's ability to make such a vocational decision before he enters college. The Indecision Scale which was developed to study this problem did not grow out of any theoretical scheme; it just happened. In performing a study of student achievement, it occurred to us: What do you suppose the differences are between students who can name a future vocation when asked in a questionnaire, and those students who give no response or ambiguous responses such as "work for the government." The Indecis-

ion Scale grew out of this simple speculation as did the analyses which followed.

The study began with an item analysis of 273 activities, hobbies, school subjects, and sports for a large sample of high aptitude students (National Merit Finalists, a sample of 500 boys and 500 girls). Students had responded by indicating those activities which they "frequently, occasionally, or never engaged in." All of the students who had "decided" on a vocation were compared with all the students who were "undecided" at the time they filled out the questionnaire, the end of senior year in high school. Students were asked to reply to the following item: "My present career choice is: (if possible name an occupation)." Students who said "undecided, don't know, or?" formed the criterion group of "undecided" students. Students giving no response or unclassifiable responses were excluded from both the "decided" and "undecided" criterion groups. About 18 per cent of the girls and 15 per cent of the boys were undecided about their vocational choice. The item analyses for each sex provided more than 30 items

¹This study is a part of the research program of the National Merit Scholarship Corporation and was supported by grants from the National Science Foundation, the Carnegie Corporation of New York and the Ford Foundation.

per sex with more than a 10 per cent difference between "decided" and "undecided" students.

To learn if this Indecision Scale had at least concurrent validity, a new sample of 217 boys was selected and scored using the 15 most discriminating items. Only 15 items were used in the final scale because we had failed to precode the questionnaire booklets for easy scoring, and because item validities dropped precipitously between 15 and 20 items.

When the median scores for the Indecision Scale for groups of "decided," "no response," "undecided," and "unclassifiable" responses were compared, we found that 100 per cent of the "undecided" students fell above the median of the "decided" students. Similarly, 100 and 66.6 per cent of non-responders and unclassifiable students respectively were above the median for "decided" students.

The items in the Indecision Scale are shown in Table 1. Although it was tempting

Table 1
Content of the Indecision Scales

Boys		Per Cent Difference
Decided ^a	Undecided ^b	
Roller skating	Reading books on art or music	34.3
Going to movies	School offices	26.2
Reading mystery or crime stories	Boating (sailing), sculling	25.1
Reading adventure or travel stories	Gambling with cards	19.0
	Writing an interpretative report of an historical event	18.4
	English	18.0
	Playing charades	17.8
	Gymnastics	17.3
	Teaching children	16.7
	Collecting books	16.2
	Coining new words	16.2
Girls		Per Cent Difference
Coining new words	Spelling	18.3
Teaching children	Music	17.5
Physics	Raising pets	17.2
Diving	Volleyball	17.0
Playing with young children	Surfboard or waterskiing	15.1
	Daydreaming	13.8
	Planning a large student conference or convention	13.8
	Designing clothes	13.7
	Roller skating	13.4
	Solving mathematical puzzles	13.0

Note: Students responded to the following directions for these items, but all responses were weighted 1 rather than 1 or 2 as the directions imply: "Make a '2' in front of those activities or hobbies which you have done regularly or frequently in the last four years. Make a '1' for those things which you do only occasionally. Leave the space blank if you have never performed the activity in question." The school subject item had the following directions: "Indicate those school subjects which you like with an 'X'"; the sports item had this direction: "Indicate with an 'X' which of the following sports you enjoy." To score the Indecision Scale any positive response (1 or 2) for the "undecided" items was scored 1, and blanks for the "decided" items were scored 1.

^aDecided students checked these items more frequently than undecided students.

^bUndecided students checked these items more frequently.

^cAll differences are significant. $P < .05$.

Table 2
Correlates of the Indecision Scale (Boys = 307, Girls = 314)

Variable	Indecision Scale		Variable	Indecision Scale	
	Boys	Girls		Boys	Girls
1. Infrequency (VPI)	.00	-.12*	25. Occupational status student believes he is certain to attain	.25**	.05
2. Realistic (VPI)	-.02	.15**	26. Level of degree sought	.18**	-.05
3. Intellectual (VPI)	-.01	.10	27. Average college grades student believes he will receive	-.08	-.07
4. Social (VPI)	.25**	.13*	28. Science Achievement (H.S.)	.11*	.04
5. Conventional (VPI)	.00	.23**	29. Oral Achievement (H.S.)	.22**	.07
6. Enterprising (VPI)	.20**	.21**	30. Leadership Achievement (H.S.)	.35**	.11*
7. Artistic (VPI)	.37**	.10	31. Music Achievement (H.S.)	.12*	.14*
8. Aggressive (VPI)	.20**	.14*	32. Art Achievement (H.S.)	.10	.13*
9. Control (VPI)	-.20	.13*	33. Literary Achievement (H.S.)	.10	-.01
10. Mf (VPI, high scores are masculine)	-.26**	-.04	34. No. of claimed competencies	.40**	.26**
11. Status (VPI)	.17**	.08	35. College grades	.14*	-.07
12. SAT-Verbal	.17**	-.22**	36. Science Achievement (college)	.00	.04
13. SAT-Math	.08	-.02	37. Art Achievement (college)	.12*	.03
14. High School Rank (HSR)	.14*	.03	38. Leadership Achievement (college)	.22**	.11*
15. Science Potential	.11*	.09	39. Oral Achievement (college)	.22**	.07
16. Oral Potential	.51**	.12*	40. Literary Achievement (college)	.29**	.01
17. Leadership Potential	.39**	.23**	41. Music Achievement (college)	.13*	.06
18. Musical Potential	.31**	.16**	42. Total Achievement (sum of 36-41)	.30**	.11*
19. Artistic Potential	.47**	.12*			
20. Literary Potential	.53**	.10			
21. Total Potential (sum of 15-20)	.50**	.18**			
22. No. of Experiences	.35**	.18**			
23. No. of Intellectual Resources in the home	.17**	.14*			
24. Occupational status student hopes to attain	.19**	-.05			

* $P < .05$.** $P < .01$.

Note: Variables 1-11 are scales of the Vocational Preference Inventory (Holland, 1958). Variables 15-20 are 15-item scales developed in an empirical item analysis to predict extracurricular achievement in college (Holland and Nichols, in press). Variables 28-33 are student scores on checklists of unusual accomplishment in high school. Variables 36-41 are student scores on checklists of unusual accomplishment in college.

to factor analyze this scale, it seemed easier and cheaper to look at the items and interpret directly what they mean. Generally, there seem to be three item clusters: (1) a socially oriented cluster of school offices, baby sitting, belonging to clubs, dating, etc.; (2) an artistic-creative cluster; and (3) an aggressive, narcissistic, perhaps psychopathic cluster including participation in weight lifting, wrestling, etc. As a check on these interpretations, these materials were presented to three different groups of high school counselors (NDEA par-

ticipants in three different states).² All three groups informally described the high scorer as "social, creative, aggressive, and feminine."

The reliability (homogeneity) of the Indecision Scale was calculated by using the Kuder-Richardson formula 20. For 492 boys, $r_H = .60$, and for 504 girls, $r_H = .40$.

²The 15-item scales plus 47 items for boys and 17 items for girls which were less effective in discriminating "undecided" from "decided" students were used in the cluster analysis.

These relatively low coefficients appear to confirm our clinical impressions of the heterogeneity of the Indecision Scale.

It seemed useful also to find out the correlates of the Indecision Scale, and whether or not it predicted anything of importance over a one-year interval (high school senior to end of freshman year in college). This analysis appeared especially promising, since the items in the Indecision Scale were loosely consistent with some earlier findings that students who changed their major field and vocational goals in college preferred social, artistic occupations (Holland, 1963). In another study, boys who changed fields more frequently than those with stable choices had parents with permissive attitudes (Holland, 1962). Since these findings—permissive parents and social, artistic interests—have been associated with originality in still other studies, a comprehensive set of empirical correlates might serve to rough out the meaning of the Indecision Scale (Holland and Astin, 1962). Table 2 summarizes the correlates of this search for meaning.

To interpret, the boy with a high Indecision score tends to prefer social, persuasive, artistic, aggressive, feminine, prestigious occupations (4, 6, 7, 8, 10, 11) relative to the low scorer. He tends to have high verbal aptitude (12), and good grades (14). Most of all he possesses unusual potential for artistic and persuasive achievements (16-20). Compared with the low scorer ("decided" boy), the high scorer ("undecided" boy) has had a greater number of experiences (22), reports more competencies (34), and comes from a home with more cultural and intellectual resources—globe, encyclopedia, tools, drawings and paintings, etc. (23). The high scorer tends to have high aspirations for occupational and educational achievement (24, 25, 26, 27). In high school and college, the high scorer tended to have higher extracurricular achievement in persuasive and artistic roles than the low scorer.

Table 2 lends then strong support to the belief that similarity to the "undecided" student is associated with a cluster of traits

which are predictive of achievement, and which were also found in previous studies associated with changing field of study and vocation. The results for girls reveal some of the same trends found for boys, but the relationships are smaller and sometimes ambiguous.

Somewhat later it seemed desirable to correlate the Indecision Scale against Barron's Independence of Judgment Scale (1953), some self-ratings, and a group of life goals. Students had also rated themselves on four point scales on a variety of traits and indicated those life goals which were "essential," "very important," "of little importance," or "of no importance." Table 3 summarizes this attempt to capture the

Table 3
More Correlates of the Indecision Scale

Variable	Correlation with Indecision Scale	
	Boys (N=239)	Girls (N=259)
<i>Self-Ratings</i>		
Originality	.28**	.05
Leadership	.22**	.16*
Scholarship	.09	.02
Artistic ability	.27**	-.02
Speaking ability	.16*	.06
Scientific ability	.01	.04
Writing ability	.33**	-.03
Interest in religion	-.24**	.00
<i>Personality Scales^a</i>		
Super Ego	-.08	-.04
Deferred Gratification	-.07	-.06
Independence of Judgment	.26**	-.04
<i>Life Goals</i>		
Being a community leader	.16*	.14*
Becoming influential in public affairs	.24**	.03
Having poems, novels, or short stories published	.29**	-.03
Producing original painting, sculpture, etc.	.15*	-.03
Becoming an outstanding instrumental musician or singer	.23**	.01
Making a contribution to scientific knowledge	-.03	-.11
Contributing to human welfare	.25**	-.21**

* $P < .05$.

** $P < .01$.

^aFrom the National Merit Student Survey (Holland & Nichols, in press).

"undecided" personality and enhance the construct validity of the Indecision Scale. Of special importance, Barron's Independence of Judgment Scale is positively associated with the Indecision Scale. We have then direct evidence that the Indecision Scale for boys is related to both a well validated scale of originality as well as a variety of important achievements believed to represent creative performance.

The self-ratings (Table 3) for boys imply that the high scoring student tends to see himself as an original and persuasive person who possesses unusual artistic and writing abilities, but lacks interest in religion. His life goals show greater desire than the low scorer to have poems, novels, or short stories published, to become influential in public affairs, to become an outstanding musician or singer, and to contribute to human welfare. Generally, these correlates (Table 3) appear consistent with the item content of the Indecision Scale, especially the artistic and socially oriented clusters.

Since a study of vocational choice was in progress for our student sample, an opportunity to test the predictive validity of the Indecision Scale occurred for the interval, senior year in high school to the end of the freshman year in college. For these analyses, student choices of vocation and major field were classified in the following scheme.

Students were first classified by their initial major field preference (senior year in high school) into one of six groups: Realistic (engineering), Intellectual (science), Social (welfare and education), Conventional (accounting and economics), Enterprising (business administration, political science), and Artistic (art, music, literature). A student's initial preference for field was then compared with the student's preference for major field at the end of his freshman year in college. If a student expressed an interest in the identical field both times he was classified as a "non-changer." If a student expressed an interest in another major field, but one falling within the same class as his original major, he was classed as an "intra-class

changer." For example, a student with a first choice of physics followed by a second choice of chemistry one year later would be an intra-class changer. If a student expressed a preference for a second major field falling in a different class, he was called an "inter-class changer." For example, physics to business administration, science to art, education to music.

Students who were "undecided" about their future vocation or who gave unclassifiable choices or did not indicate any choice were excluded from these analyses so that the validation was performed only on "decided" students. This procedure was believed to eliminate chance factors which would favor the validity of the scale. It would also provide a severe test of its validity, since we have forced the scale to work within a smaller range of decisiveness as well as for a different purpose—change in choice of vocation or major field as well as indecision about choice. Table 4 indicates that the Indecision Scale is positively related to change in both major field and vocation for boys, although these results are not statistically significant. The percentage of boys who are "undecided" after one year of college also increases with an increase in the Indecision Scale score.

The findings for girls are ambiguous; the Indecision Scale is not related to change in field, or to being "undecided" in major field. Several attempts to clarify the meanings of these results by reclassification of the data by scores on various test measures were as uninterpretable as the first analysis in Table 4.

Since another sample of students was available for cross-validation of the Indecision Scale, the analyses in Table 4 were repeated for samples of 336 boys and 51 girls, whose responses were not used in the development of the Indecision Scale. The results of these analyses are presented in Table 5.

In this instance, the results in Table 5 replicate the major findings obtained in Table 4. The findings for boys clearly suggest that the Indecision Scale predicts change in major field and indecision about

Table 4
The Predictive Validity of the Indecision Scale for Change in Vocational
Choice or Major Field over a One-Year Interval

Vocational Choice												
Change Status	Boys (N=186) ^a Indecision Score						Girls (N=237) ^a Indecision Score					
	High		Average		Low		High		Average		Low	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent	N	Per cent	N	Per cent
No change	25	64.1	60	67.4	46	79.3	67	69.8	38	62.3	47	58.8
Intra-class	5	12.8	8	8.9	1	1.7	10	10.4	6	9.8	13	16.3
Inter-class	3	7.7	14	15.7	7	12.1	16	16.7	9	14.8	11	13.8
Undecided one year later	6	15.4	7	7.9	4	6.9	3	3.1	8	13.1	9	11.3
Total	39	100.0	92	99.9	58	100.0	96	100.0	61	100.0	80	100.2
	$\chi^2 = 8.85$ df = 6 P < .20						$\chi^2 = 8.51$ df = 6 P < .20					
Major Field												
Change Status	Boys (N=302) ^a						Girls (N=290) ^a					
	High		Average		Low		High		Average		Low	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent	N	Per cent	N	Per cent
No change	30	38.9	78	54.5	49	59.8	61	50.0	33	47.1	51	52.0
Intra-class	11	14.3	23	16.1	5	6.1	18	14.8	11	15.7	15	15.3
Inter-class	32	41.6	38	26.6	25	30.5	41	33.6	22	31.4	28	28.6
Undecided one year later	4	5.2	4	2.8	3	3.7	2	1.6	4	5.7	4	4.1
Total	77	100.0	143	100.0	82	100.1	122	100.0	70	99.9	98	100.0
	$\chi^2 = 12.22$ df = 6 P < .06						$\chi^2 = 2.98$ df = 6 n.s.					

^aDiffering N's result from excluding a variable number of initially undecided students.

Table 5
The Predictive Validity of the Indecision Scale for Change in Vocational Choice
and Major Field over a One-Year Interval (Cross-Validation Sample)

Vocational Choice												
Boys (N=336) Indecision Score						Girls (N=51) Indecision Score						
Change Status	High		Average		Low		Average		High		Low	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent	N	Per cent	N	Per cent
No change	53	60.9	86	53.7	58	65.1	13	65.0	8	61.5	6	33.3
Intra-class	11	12.6	29	18.1	15	16.9	0		3		2	
Inter-class	14	16.1	26	16.3	11	12.4	6	35.0	1	38.5	5	66.6
Undecided	9	10.3	19	11.9	5	5.6	1		1		5	
Total	87	99.9	160	100.0	89	100.0	20	100.0	13	100.0	18	99.9
$\chi^2 = 5.35$; df = 6; n.s.						$\chi^2 = 4.25$; df = 2; P < .20						
Major Field												
Boys (N=343)						Girls (N=53)						
No change	38	41.3	54	44.3	78	60.5	3	33.3	14	50.0	6	37.5
Intra-class	14	15.2	22	18.0	20	15.5	1	11.1	4	14.3	6	37.5
Inter-class	31	33.7	29	23.8	24	18.6	4	44.4	5	17.9	3	18.8
Undecided	9	9.8	17	13.9	7	5.4	1	11.1	5	17.9	1	6.3
Total	92	100.0	122	100.0	129	100.0	9	99.9	28	100.1	16	100.1
$\chi^2 = 15.25$; df = 6; P < .02						$\chi^2 = 1.32$; df = 2; n.s.						

major field over a one year interval ($P < .02$).

Since it is possible that these positive results may be due to differences in vocational interest between changers and non-changers, rather than any unique property of the Indecision Scale, the analysis for major field was repeated for boys in science and non-science fields. Again, the same trends were obtained: science fields ($P < .10$), and non-science fields ($P < .02$). Finally, Social fields and Artistic fields were analyzed separately. The 3×4 table for Social fields was significant ($P < .05$); the table for Artistic fields was not, although the same trends were observed within this table with a small sample ($N=24$). These results suggest that the validity of the Indecision Scale is relatively independent of a student's vocational interests as assessed by his initial choice of major field.

Discussion

The use of a student sample of high aptitude and high socioeconomic status limits the applicability of the findings to more typical student samples. New studies are needed with normal populations.

It is difficult to place the Indecision Scale in any theoretical context, since it grew out of a simple speculation, and since it was developed in a natural, social setting and validated against an important social problem with a large sample. In contrast, most investigations of decision-making and risk-taking have grown out of explicit theory building followed by carefully planned experiments which use such problems as shuffleboard scores, betting small amounts of other people's money, or by taking "risks" in a life-like questionnaire. Despite these differences in orientation, there appear to be several gross similarities between the findings obtained here and those findings obtained earlier by other workers.

Earlier assertions and findings that risk-taking and indecision are associated with personality and interest variables receives some support (Anker, Townsend & O'Connor, 1962; Hogan, 1961; Scodel, Ratoosh & Minas, 1959). Although these studies

have little in common with the present one, significant relationships between decision-making and masculinity, social and esthetic interests are threaded through all these investigations and the present study.

The observation by MacKinnon (1959) and others that creative persons are more likely to change field and to defer vocational decisions in college is given strong support by our results, since it is clear that the Indecision Scale is positively associated with both the potential and performance of creative work, especially in the arts. In another study of National Merit Finalists, students who were "undecided" about future vocation, had parents who expressed more permissive attitudes about child training than did students who had made vocational decisions (Holland, 1962). Permissive parental attitudes were found, in turn, to be associated with creative accomplishments (Nichols, in press). In short, failure to make a vocational choice upon graduation from high school and the tendency to change plans (vocational and educational) appear to be associated with a cluster of personal traits which appear conducive to achievement and creative performance.

The practical value of the Indecision Scale seems remote. Perhaps, it may serve only to make vocational counselors sensitive to the fact that students who are "undecided" about a vocation may be in such a state for several reasons: they may have a complex and creative outlook about the world, especially the world of work; they may be confused and unstable; they may be poorly informed about vocations; and so on. In the past, we have been perhaps too ready to equate indecision with illness, confusion and the need for counseling. For some people, the deferment of vocational choice may represent a slow and complex rate of personal development.

In new work, it may be advantageous to see if the Indecision Scale is associated with measures of emotional instability, since some of the items in the Indecision Scale appear to assess a similar disposition. The use of the Indecision Scale may pro-

vide some insights about vocational choice and the influence of various aspects of the environment upon such choices. Why, for example, do students in Social fields seem to be so sensitive to the influence of their college environment as earlier studies suggest (Holland, 1962, 1963). Some items in the Indecision Scale imply an oral dependent character who would be particularly amenable to social influence. Finally, the present results suggest the need to control for personality variables in experimental studies of decision making.

The invalidity of the Indecision Scale for girls is clear from the results. The most likely reason for this occurrence may be that vocational choice is not as important a decision for girls in our culture as it is for boys. A delay in vocational decision for girls may be due to many different causes. Some girls may tend to delay vocational decisions until they come to a decision about marriage; or an interest in raising a family may preclude any vocational decision at all.

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Personality Variables and Counselor-Client Affect

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Measures of client and counselor autonomy, alienation and withdrawal, and guardedness, and the interactions of these variables between the client and his counselor were employed as predictor variables in an analysis of regression design where several estimates of counselor-client affect were offered as criterion variables. The counselor and client samples (18 and 121, respectively) were drawn from 8 university counseling centers and the measures were obtained for initial interviews only. The combined levels of guardedness of counselor and client were positively related to the combined expressions of positive affect.

The research reported by Snyder in *The Psychotherapy Relationship* (1961) triggered a series of speculations about a parallel entity—the counseling relationship. It is possible to indicate some operational differences between agencies offering psychotherapy and the counseling centers that attempt to meet a broader range of vocational, social-personal, and educational problems. Counseling psychologists (such as those operating in university counseling centers), like psychotherapists, search for meaningful ways of describing their interactions with clients, and for the variables that have an impact on this interaction.

In addition to providing objective measures of client affect expressed toward the therapist (PAC-NAC), and therapist affect expressed toward the client (PAT-NAT), Snyder suggested that the nature of this affective exchange might well be a function of the personality patterns of the participants and the interactions of the two sets of personality variables. A single therapist, multiple-client design placed some limitations on generalizing Snyder's findings

about client-therapist personality interactions, but there is evidence that his data were not idiosyncratic (Arbuckle, 1956; Leary, 1957).

A number of counselor and client personality dimensions have been proposed as variables relevant to the counseling process (Ashby, Ford, Guernsey & Guernsey, 1957; Bandura, 1956; Greenfield & Fey, 1956; Holt & Luborsky, 1958; Lorr & Rubinstein, 1956; Rogers & Dymond, 1954; Snyder, 1961; Tuma & Gustad, 1957). Among the more promising were autonomy, alienation and withdrawal, and guardedness.

Describing the counseling relationship—at least as a single entity—posed something more of a problem. Snyder saw the psychotherapy relationship as the "reciprocity of various sets of affective attitudes which two or more persons hold toward each other in psychotherapy" (1961, p. 364, emphasis in the original). In effect, the expressions of positive-negative affect of therapist and client should vary directly with each other; where the client has warm, positive feelings toward the therapist, the feelings would be reciprocated in kind, and negative, angry feelings on the part of either participant would be similarly mirrored by the other.

While Snyder effectively demonstrated this phenomenon for his therapist-client sample, it seemed unlikely that the fewer number of contacts characteristically found

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in a counseling service setting would be likely to generate an affective exchange of similar intensity. The dearth of research or theoretical descriptions of the counseling relationship made a frankly exploratory approach, with alternative definitions, seem appropriate.

Of primary concern, then, was the derivation of a meaningful description of the counseling relationship, the identification of components in the clients' and counselors' personality patterns and the interactions of these components, as they have an impact on the relationship.

Method

Sample

Eighteen male counselors and 121 clients (85 males, 36 females) from eight university counseling services participated in the study.

Some diversity of counseling service philosophy and geographic location was considered desirable in light of comments made by Danskin and Robinson (1954) about the homogeneity effects that plague some counseling process research. Counseling services on both coasts, the Great Lakes region, the plains states, and the mountain states were represented in the sample. Only 2 counselors of the 18 received their most recent degree from the same institution. All of the counselor sample were paid staff members of the respective agencies, and had completed supervised practicum training; 8 held the doctorate, 13 had completed an approved internship, 14 had a year or more (full-time equivalent) of paid experience.

Clients were obtained more or less in the order of their appearance at the respective counseling services and were assigned to their counselors according to the system prevailing at that particular agency. The client sample was self-selected to the extent that each client decided whether or not he (she) would participate after reading a description of the research.

Instruments

Personality Measures. The personality scales used in the research were drawn from the Omnibus Personality Inventory—

Form C (OPI), an instrument devised at the Center for the Study of Higher Education (1962). It provided a normative sample from a population similar to the one from which the client sample was drawn. To conserve counselor and client time, only three of the 13 OPI scales were administered: Autonomy (Au), Schizoid Functioning (SF), and Repression and Suppression (RS). The authors' descriptions of the scales follow.

Autonomy (Au) (40 items): The characteristic measured is composed of nonauthoritarian thinking and a need for independence. High scorers are sufficiently independent of authority, as traditionally imposed through social institutions, that they oppose infringements on the rights of individuals. They are nonjudgmental, realistic, and intellectually liberal.

Schizoid Functioning (SF) (74 items): The high scorers admit to attitudes and behaviors that characterize socially alienated persons. Along with feelings of isolation, loneliness, and rejection, they may intentionally avoid others and experience feelings of hostility and aggression. The ego weakness of high scorers may be characterized by identity confusion, day-dreaming, disorientation, feelings of impotence and fear of loss of control.

Repression and Suppression (RS) (120 items): The high scorers are inhibited, prudent and cautious, as expressed in their attitudes toward themselves and toward others. Consequently they tend to reject items that express social alienation, unconventional or socially undesirable behavior. Low scorers, on the contrary, are relatively uninhibited and lacking in prudence and caution. The most realistic college students probably score near the mean (Center for the Study of Higher Education, 1962, pp. 5-6).

Client and Counselor Affect Scales. The measures of client affect and counselor affect were based on Snyder's PAC-NAC and PAT-NAT scales (1961). PAC-NAC was an index of the positive and negative attitudes of the client toward the therapist, and PAT-NAT represented the positive and negative attitudes of the therapist toward the client. Both are objective measures that the respective participants complete following each interview.

Both scales were revised following a pilot administration to a counseling service sample of clients and counselors, although the item values assigned by Snyder were retained. Lower case letters (pac-nac, pat-

nat) are used to designate the revised scales.

Procedure

Answer sheets for the personality scales and affect scales were assigned code numbers that enabled matching of clients with counselors and permitted blind assignment of code designations to the counselor and client respondents by the receptionists at the various counseling centers, thus maintaining counselor and client anonymity. Counselors had completed their personality scales before seeing any of the client sample. Clients completed the same scales prior to the first or initial interview. Affect measures for both participants were filled out immediately following the initial interview and were individually mailed to the investigator. All of the data were based on initial interviews only.

The Analysis

Predictor Variables

Serving as predictor variables, then, were the *Autonomy*, *Schizoid Functioning*, and *Repression-Suppression* scores on the OPI for both counselors and clients. Additional predictors were computed from the discrepancy between the counselor's and client's scores for each of the three scales, the sum of these discrepancies, and the crossproducts of the client's and counselor's scores for each of the OPI scales. The crossproducts of the client's and counselor's scores for each of the OPI scales were included as indices of covariance or interaction effects. The derived scores and their designations follow:

Au-d The discrepancy between the counselor's and client's *T* scores on the *Au* scale (arithmetic difference without reference to sign).

SF-d The discrepancy between the counselor's and client's *T* scores on the *SF* scale (arithmetic difference without reference to sign).

RS-d The discrepancy between the counselor's and client's *T* scores on the *RS* scale (arithmetic difference without reference to sign).

Sum-d The absolute sum of the above discrepancies.

Au-xprod The cross product of the counselor's and client's *T* scores on the *Au* scale.

SF-xprod The cross product of the counselor's and client's *T* scores on the *SF* scale.

RS-xprod The cross product of the counselor's and client's *T* scores on the *RS* scale.

Criterion Variables

Combinations of the revised counselor and client affect scales (*pat-nat* and *pac-nac*) served as the criterion variables. Some reservations about applying Snyder's concept of reciprocity in counseling interviews were noted earlier; nonetheless, there was considerable uncertainty as to what combinations of affect scores would best describe the counseling relationship. Three ways of combining scores were eventually tried, each being a different arithmetic combination of the two affect scores:

Affect-sum An estimate of counselor-client affect; high scores reflecting predominance of positive affect in the interview, low scores reflecting the predominance of negative affect in the interview (without regard to the source of affect).

$$\text{computed by: } \frac{\text{pac-nac} + \text{pat-nat}}{2}$$

Affect-xprod An estimate of counselor-client affect; high scores reflecting predominance of positive affect in the interview, low scores reflecting predominance of negative affect in the interview (without regard to the source of affect).

$$\text{computed by: } (\text{pac-nac}) \cdot (\text{pat-nat})$$

Affect-diff Difference in client and counselor affect, high scores (51 or more) indicating that the client expressed relatively more positive affect than did the counselor, and low scores (49 or less) indicating that the counselor ex-

pressed relatively more positive affect than did the client.

computed by: $50 + (\text{pac-nac}) - (\text{pat-pat})$

High scores for the first two, of course, reflected a predominance of positive affect in the interview and low scores predominantly negative affect. Because counselor scores were subtracted from client scores to obtain the difference function, high scores indicated that the client expressed relatively more positive affect than did the counselor, and low scores indicated that there was relatively more positive affect expressed by the counselor.

Treatment of the Data

A matrix of product moment correlations was obtained for all predictor and criterion variables. Later, the predictor variables were inserted in a multiple regression equation and were matched against each of the criterion variables in turn. Predictor variables were tested for loss in an analysis of multiple regression.

Results

Two scales from the OPI, *SF* and *RS*, were more highly correlated for this client sample ($-.95$) than they were for the standardization sample. This close relationship effectively reduced the number of personality variables to two: (1) *Au* (Autonomy), which remained independent of the other two, and (2) a pattern represented by *RS* (Repression-Suppression) and *SF* (Schizoid Functioning) in which the respondent showed varying degrees of denying psychopathology, or inversely, degrees of saying "I'm fine."

Product moment correlations for *pac-nac* with *pat-nat* (client positive-negative affect with counselor positive-negative affect) were low (.16) and statistically nonsignificant. The failure to demonstrate the reciprocity of counselor and client affect found by Snyder was disappointing, even though anticipated. However, if any combination of the two affect scores (criterion variables)

Table 1
Product Moment Correlations of Counselor and Client Personality Variables with Counselor Affect and Client Affect

	Client Scales			Counselor Scales		
	<i>Au</i> ^a	<i>SF</i> ^a	<i>RS</i> ^a	<i>Au</i>	<i>SF</i>	<i>RS</i>
Client Affect						
<i>pac-nac</i>						
Counselor Affect						
<i>pat-nat</i>						

^a*Au*—Autonomy.

SF—Schizoid Functioning.

RS—Repression-Suppression.

**Significant at the .01 level of confidence.

n.s. Not statistically significant.

Table 2
Product Moment Correlations for Client-Counselor Personality Interactions with Criterion Measures

	<i>Au</i> -xprod ^a	<i>SF</i> -xprod	<i>RS</i> -xprod
Affect-sum ^a			
Affect-xprod			
Affect-diff			

^aSee description in text under "Predictor Variables" and "Criterion Variables" of rubrics used in this table.

*Significant at the .05 level of confidence.

**Significant at the .01 level of confidence.

n.s. Not statistically significant.

were significant correlates of the predictor variables, conceptualizing the counseling relationship as a function of two uncorrelated variables would still be possible.

While the study yielded a number of statistically significant correlations between predictor and criterion variables, both in product moment and multiple R form, in no case was more than 13 per cent of the variance-in-common accounted for. All of the subsequent discussion should be read with such thimble-full proportions in mind.

The "I'm fine" pattern noted above turned out to be a correlate of positive affect as indicated in Table 1. The expression of positive feelings toward the opposite partner was a slight but significant correlate of expression of the "I'm fine" pattern. Expression of positive self regard, then, was accompanied by expression of positive regard for the partner, and expression of negative self regard by expression of negative regard for the other participant. The over-all pattern might indicate, "I'm fine—we hit it off well."

Interaction effects between counselor and client personality variables were obtained. As shown in Table 2, crossproducts of client and counselor scores on the "I'm fine" variables correlated significantly with two of the criterion measures of the relationship—specifically, sums of the counselor and client affect scores (Affect-sum), and crossproducts of the two affect scores (Affect-xprod).

Discrepancies between client and counselor scores on the personality variables of *SF* and *RS* were significant correlates (shown in Table 3) of the difference criterion (Affect-diff) of the counseling relationship.

When all predictors were tested for loss in an analysis of regression (using each of the criterion variables in turn), the interactions of client and counselor scores on the "I'm fine" variables were found to be the single best predictors of client-counselor affect, both as an additive function and as a multiplicative function (Table 4). The test for loss did not, of course, take into account the possibility that the crosspro-

Table 3
Product Moment Correlations for Measures of Discrepancy Between Client and Counselor Personality Scores with Criterion Measures

	Au-d ^a	SF-d	RS-d	Sum-d
Affect-sum ^a	n.s.	n.s.	n.s.	n.s.
Affect-xprod	n.s.	n.s.	n.s.	n.s.
Affect-diff	n.s.	-.27**	-.25**	-.26**

^aSee description in text under "Predictor Variables" and "Criterion Variables" of rubrics used in this table.
^{**}Significant at the .01 level of confidence.
n.s. Not statistically significant.

Table 4
Values of *F*, Multiple *R* with Optimum Predictor Variables for Counselor-Client Affect Measures

Criteria	Optimum Predictors	<i>R</i>	<i>F</i>	df
Affect-sum ^a	RS-xprod ^b , Au-xprod	.29	5.37**	2/118
Affect-xprod	RS-xprod ^b , Au-xprod	.29	5.57**	2/118
Affect-diff	SF-d ^b , Au-counselor, SF-counselor, client sex	-.36	4.40**	4/116

^aSee description in text under "Predictor Variables" and "Criterion Variables" of rubrics used in this table.
^bVariable accounting for largest portion of variance in the criterion; dropping of other predictor variables did not produce significant loss.
^{**}Significant at the .01 level of confidence.

ducts of client and counselor *RS*—and *SF*—might not remain significant predictors if the variance in the criterion measures accounted for by *RS* and *SF* of counselor and client as individual predictors was controlled. Accordingly, *F* ratios were computed for client and counselor *RS* scores against the interaction effects (*RS*-xprod), with the variance attributable to client *RS* and counselor *RS* held constant. Interaction effects for this variable correlated with the summed affect of client and counselor yielded an *F* ratio of 3.62 (significant at the .07 level of confidence, *df*=1/118), and the same predictor correlated with the crossproducts of client and counselor affect (*Affect*-xprod) yielded an *F* value of 4.12 (significant at the .05 level of confidence, *df*=1/118).

The discrepancies between counselor and client scores on the *RS* and *SF* variables were the best predictors of which partner in the relationship expressed the greater amount of positive affect.

Autonomy, at least as measured by the OPI scale, proved a total loss. In no instance did it or its derivatives show a significant relationship with any of the criterion measures.

Discussion and Conclusions

In general, the study suffered from a number of limitations: the personality variables studied were too few in number and, in retrospect, seemed injudiciously chosen; responses were obtained for initial interviews only; the diagnostic sorting of clients according to presenting problem might have reduced some error variance. While the latter information had been requested, only a portion of the counselor sample consistently indicated the nature of the client's concern. A more reliable index of counselor affective expression would probably be derived if his affect score for a particular interview were assessed against the total range of his affect scores.

The "I'm fine—we hit it off well" pattern was interesting, but too limited to give support to (or do violence to) existing theoretical formulations. It comes suspiciously close

to a "yea-saying" tendency. Clients might be guilty of such a pattern, but to so indict counselors seems a bit high-handed, and, at the very least, ungrateful.

Some caution should be used in referring to the counseling relationship (at least in initial interviews) as though there were feelings that the client and counselor held in common, or as though both had similar perceptions of their affective interaction. Correlations of client affect scores with the counselor affect scores were low and non-significant. Significant correlations were obtained for one counselor-client affect measure (the crossproduct of the two affect scores) with the interaction (crossproduct) of client and counselor scores on a guarding scale; this correlation remained significant when the contributions of counselor and client guarding scores were held constant. Interaction of client and counselor personalities on the guarding variable, then, accounts for variance in counselor-client affect in addition to that accounted for by the guardedness of counselor and/or client as uncombined variables.

It may be possible—and necessary—to think of the counseling relationship as something other than reciprocity of affect between the participants. To determine the nature of this relationship it would seem necessary to include a wider range of personality variables, to control for the presenting problem of the client, and to observe counselor-client affect over a series of interviews.

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Subscriptions to this Journal from Other Countries (as of May, 1963)¹

	No.		No.
Japan	48	Sweden	2
Canada	35	Holland	2
Australia	16	Egypt	1
India	10	Finland	1
Israel	4	Formosa	1
Italy	4	Iceland	1
Belgium	3	Ireland	1
South Africa	3	New Zealand	1
France	3	Belgian Congo	1
Brazil	2	Nigeria	1
Denmark	2	Poland	1
Ethiopia	2	Turkey	1

¹Of some interest is this listing from our subscription files. Counseling Psychology has become meaningful for a considerable variety of peoples. Translation into Japanese of *Journal* articles and of books on the subject has been noted at various times in these pages. No inferences are drawn from this simple listing of facts—but questions bristle. Why, for example, have we no subscribers in England or Germany?—Ed.

Silence in Psychotherapy

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Duration of silences during a therapy interview was considered as a possible index of therapeutic movement. Per cent of client-terminated silences in each of 40 2-minute segments were obtained early and late in therapy from successful and unsuccessful cases. Each segment was also rated on Roger's Process Scale. The silence ratio was independent of the time variable but was related to the success variable ($p < .01$) as well as to the ratings ($p < .01$) in the form of an inverted u relationship. The silence ratio seemed to index therapist behavior and might have value as an index of the potential productiveness of a therapeutic relationship.

A great deal of attention has centered on the rating of spoken content from therapy interviews as a means of making inferences about movement in therapy or personality change. Verbal productiveness, per se, has also received limited attention. Gibby, et al. (1960) found that the amount of verbal production in group therapy was related neither to positive nor negative attitude change toward authority figures and social conformity.

Relatively little attention has been paid to silence, at the experimental level, as a means of making inferences about movement in psychotherapy. At the theoretical level, May (1958) has pointed out that verbal output can easily be a defense against reality and the experiencing of "some issue in which he has an immediate and absolute stake." Some years ago, Rogers (1942) raised the question of movement in therapy being possible during silences. Gendlin (1960) has recently developed a theory around the concept of experiencing which he defined as "the continuous stream of feelings with some few explicit contents." He delineated several modes of experiencing. One, continuous internal reference, was considered analogous to the working

through or "living in immediate feeling," described by Rogers (1958) and considered necessary if movement in therapy is to occur. Gendlin postulated that this mode of experiencing was likely to occur during silence. A second mode of experiencing was termed discontinuous internal reference, speech being one instance of this mode and presumably not as conducive to the "living in of immediate feeling" as silence.

Considering the evidence, both experimental and theoretical, it seems not unlikely that silence might well be a necessary condition, or at least an index of a necessary condition, for movement in psychotherapy. Obviously, it could not be a sufficient condition in a linear sense. For, if one considers duration of silences that are terminated by the patient as the main parameter, it would seem that two extremes (all silence and no silence), persisting over a considerable number of interviews would be indicative of maladaptation or at least a nonproductive therapeutic relationship.

The present study was a preliminary attempt to explore the silence dimension and its relationship to movement, or lack of it, in client-centered therapy. Two questions were asked:

1. Was the proportion of silence terminated by a client, and the proportion of client speech in a two-minute segment independent of whether the segment was taken

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from a more successful or less successful case? On the basis of the above, it was hypothesized that speech-silence and more or less success were not independent in the nonpsychotic therapy cases considered.

2. Should the above hypothesis be substantiated, then a second question could be asked: What was the optimum proportion of silence in a two-minute segment associated with success in therapy? It was difficult to indicate a specific proportion except to note that, upon the basis of the above argument, it should be neither 0 per cent (all speech) nor 100 per cent silence.

Procedure

Data from a previous study (Tomlinson & Hart, 1962) based on clients seen at the University of Chicago Counseling Center were used. Five more successful, and five less successful cases had been identified by means of therapist ratings and test results. An early interview (second from first) and a later interview (second from last) had been chosen from each client. Each interview on each client had had nine two-minute segments extracted at intervals of three minutes. Thus, each cell of a 2×2 (success versus early-late) table characterized 45 segments. From each cell, a random selection of 10 segments had been made. It is these 40 segments which were analyzed in the present study.

Two judges used both tapes and transcripts to rate the segments on the Process Scale (Rogers & Rablin, 1960). This scale is divided into seven strands—Feelings and Personal Meanings; Experiencing; Incongruence; Communication of Self; Construing of Experience; Relationship to Problems, and Manner of Relating—which the raters take into account to arrive at a global rating of the clients' process level, ranging from 1.0 to 7.0. Interjudge reliability was .65, and the average of the two judges' ratings was considered the process level for each segment.

The amount of silence on these 40 two-minute segments was noted. A silence was not considered as such unless it lasted for five seconds or more. The actual measure

considered was the proportion of silence, as defined, during the 120-second segment. Only those silences were considered which had been terminated by the client. Of all the silences of five seconds or more, in all 40 segments, 70 per cent were client-terminated and 30 per cent therapist-terminated.

Results

Table 1 shows the frequency count of the 40 segments in terms of more successful,

Table 1

Amount of Silence in Segments from More Successful and Less Successful Cases

	More Successful	Less Successful
Speech (0-3 per cent silence)	4	13
Silence (4 per cent or more)	16	7
$\chi^2 = 8.29$	$P < .01$	

less successful, and speech-silence in the two-minute segments. The obtained value of chi square (8.29) was significant at the .01 level, indicating that the two variables were not independent.

Since 20 of the segments were obtained early in therapy, and 20 late in therapy, it was of some interest to ascertain if speech-silence was related to the early-late dichotomy.

Table 2

Amount of Silence in Segments from Early and Late Interviews

	Early	Late
Speech (0-3 per cent silence)	9	8
Silence (4 per cent or more)	11	12
$\chi^2 = 0.50$	$.50 > P > .30$	

Table 2 shows the frequency count of the 40 segments in terms of these two variables. A nonsignificant chi square (0.50) indicated that these two variables were independent. It would have been more informative to have done a 2×2 factorial analysis rather than these two chi square analyses in order to test for a possible interaction between early-late and more-less successful. However, per cent silence, the dependent variable, had a marked poisson

distribution and the variance within cells was markedly different.

In order to find what might have been the optimum percentage of silence associated with segments from the more successful cases, or presumably analogous, higher process ratings, a further analysis was undertaken.

Table 3 shows the mean process ratings for speech (0.3 per cent silence) and three ranges of percentages of silence. The table indicates that lower process ratings were associated with both the lesser percentage of silence (0.3) and the longer silences (21 per cent or more).

A source table from an analysis of variance of the data from Table 3 is shown in Table 4.

ated with segments from less successful client-centered therapy cases and silence was associated with segments from more successful cases was substantiated. Also, it was found that neither speech nor silence was associated with segments obtained early and late in therapy.

The second hypothesis centered around the notion that there was an optimum proportion of silence, neither 0 nor 100 per cent, associated with the segments from cases judged and tested as successful. However, the success variable was a dichotomy and, therefore, not amenable in the analysis of a curvilinear relationship. Evidence was available that process ratings, a continuous variable, were linearly related to external measures of success. Conse-

Table 3
Process Ratings in Relation to Percentage Silence

	Ranges of Percentage Silence			
	0-3	4-10	11-20	21+
N	17	12	5	6
Mean Process Rating	2.61	3.48	3.44	3.02
Mean Percentage Silence within Range	0.1	6.0	17.2	28.1

Table 4
Source Table of Analysis of Variance of Process Ratings by Levels of Percentage of Silence

Source	df	SS	MS	F
Between Silence Percentages	3	6.28	2.09	4.50**
Within Silence Percentages	36	16.75	4.46	
Total	39	23.03		

** $p < .01$.

The significant *F* ratio was taken as indicative of an inverted *U* relationship between proportion of silence and process ratings over the range (0.38 per cent) investigated with the maximum process ratings occurring when the proportion of silence was between 4 and 20 per cent. Calculation of an unbiased correlation ratio indicated that 22 per cent of the total variation in the process measures could be attributed to factors associated with proportion of silence.

Discussion

The first hypothesis that continuous speech (0.3 per cent silence) was associ-

quently, the process ratings and proportion of silence were analyzed with a view to testing the second hypothesis. An inverted *U* relationship was found to exist within a range of proportion of silences from 0 to 38 per cent. The largest process ratings were associated with segments having a proportion of silence between 4 and 20 per cent.

Replication of this study to test the generality of this finding is obviously needed since a number of limitations existed in the study. For instance, all the cases were out-patients and exposed only to client-

centered therapy, the range of silences investigated was small, the number of segments in the upper proportions of silence was very small, and the sampling technique did not allow an investigation of individual differences with any precision.

In spite of these shortcomings, it is of some interest to explore some notions arising out of the study. For instance, one might assume that a proportion of silence (4 to 20 per cent) is indeed associated with success (or higher process ratings) in therapy with the type of patient investigated, yet is not associated with length of time in therapy, even though success is (Tomlinson & Hart, 1962). If this assumption holds then it seems one might have here an index capable of some success in predicting the course of therapy. Implicit would be the idea that proportion of silence is essentially a measure of the potential productiveness of the therapeutic relationship, not a measure of the client's or patient's mental health, *per se*. For, conceivably, a person might be seriously ill yet obtain an outstanding relationship with a therapist (characterized, presumably, by the optimum silence ratio). While positive movement might be expected to take place, no change in the silence ratio would be expected to take place unless the relationship deteriorated. On the other hand, a comparatively well person might have an unproductive relationship which, on the basis of this study, would be characterized by either all talk or a silence proportion beyond 20 per cent. The findings tentatively suggest that such a relationship would tend to persist, although a factorial design would be required to establish that no interaction in terms of silences existed between the early-late and more-less successful variables.

Of interest also, is an inquiry into what the factors associated with the silence ratio might be. It has been concluded that the silence ratio taps an aspect of the therapeutic relationship, the "climate" of the therapeutic interview. However, circumstances conspire to make the therapist the prime factor in determining the climate of

the therapeutic interview. The client is in grave need because of problems that he does not understand. He wants help from a knower, an expert, a person of competence. This, plus the aura of prestige surrounding the therapist, would make him a salient factor in determining the therapeutic relationship.

The notion that a client's silence ratio might be indicative of the therapist's behavior has limited support from one study. Goldman-Eisler (1952) delineated several aspects of the verbal behavior of a number of patients and three psychiatrists during an initial information-taking interview. One of the measures she delineated was somewhat analogous to our silence ratio. This measure was the ratio of short silences (less than five seconds) to long silences (more than five seconds), or "bs/ds," and she considered it a conversational activity measure. She found the psychiatrists were consistent with themselves in terms of bs/ds, regardless of the type of patient. Whereas, the patient's conversational behavior, while also self-consistent with respect to bs/ds, varied significantly in response to the individual interviewers.

A study by Halkedes (1958) throws some light on what the factors associated with the silence ratio might be. Halkedes, starting from the theoretical formulations of Rogers (1958), investigated the relationship between constructive personality changes in the client and four attitudes of the therapist—empathic understanding, unconditional positive regard, congruence, and matched intensity of affective experience. The design of Halkedes' study was identical with the one from which our data were taken. She found that the first three therapist attitudes, as rated on two-minute segments, differentiated the segments from the more and less successful cases, but did not differentiate between segments taken early and late in therapy. Interjudge correlations of these various attitudes were in the .90's, except for the fourth attitude. The very high intercorrelation of the first three attitudes suggested that they might well be tapping one basic factor which,

since the three attitudinal measures seem to covary with the silence ratio, might be directly measurable by means of the silence ratio.

Summary

Forty two-minute segments from tape recordings of successful and unsuccessful psychotherapy cases were rated in terms of Rogers' Process Scale and a silence ratio was obtained from each segment. It was found that a lack of silence (at least 97 per cent speech in the two-minute segment) characterized the unsuccessful cases, whereas, a lesser percentage of speech tended to characterize the successful cases. Using the process ratings as a continuous measure of the successful segments, it was found that the segments with the highest process ratings had a range of silences from 4 to 20 per cent of the two-minute segment. Segments with less than 4 and more than 20 per cent silence had lower process ratings.

In the discussion, it was argued that the silence ratio could be a therapist variable indexing the highly intercorrelated therapist attitudes of empathic understanding, unconditional positive regard and congruence.

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Supervising Students in the Counseling Practicum¹

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In this paper the nature of the supervisory relationship of the counselor educator and the student in the counseling practicum is explored. It is suggested that this relationship is not the usual didactic teaching relationship, nor is it, as Arbuckle suggests, a nonevaluative, counseling relationship, though it is closer to the latter than to the former. The nature of the relationship is discussed and the implications for techniques or procedures suggested.

In contrast to the extensive literature on supervision in psychotherapy (see, e.g., Ekstein and Wallerstein, 1958), and in social casework (e.g. Robinson, 1936, 1949), there is almost nothing on the supervision of counseling. The articles by Cottle (1952, 1955), Korner and Brown (1952), Anderson and Bown (1955), and the study by Walz and Roeber (1962) practically exhaust the literature. The only text which deals with supervision is that of Sanderson (1954).

Since most counselor educators would agree that "the practicum is in some respects the most important phase of the whole process of training in counseling" (American Psychological Association, 1952), it would appear to be high time that we gave some consideration to the supervising process. The value of the practicum depends on two things: (1) the number and variety of clients with which the student works and the intensity or duration of his work with them, and (2) the supervision which he receives. The first is of little value, however, unless the amount and quality of supervision is adequate. My observation would indicate that most practicums are weak in both these areas. We are concerned here only with the latter, however.

That all is not well with supervision of counseling students is indicated by the study of Walz and Roeber (1962). They provided a typescript of a student interview to a group of counselor educators to be reacted to as in supervision. Forty-seven percent of the responses given were classified as instructional and twenty-six percent as questioning, both types being mainly concerned with defects in the student's performance. In addition another five per cent of the responses simply identified errors. Six per cent of the counselor educators' reactions were classified as interpretive, four per cent as suggestions of alternative student responses, and eleven per cent were classified as supportive. The concern was mainly with the student counselor rather than with the client, with few references to the relationship or interaction between the student and the client. The investigators conclude that supervision is cognitive and information giving, with negative overtones.

If supervisors actually function as this study indicates, and there is no evidence to indicate that they do not, then supervision is woefully inadequate, and is perhaps more harmful than helpful to the student. It appears that counselor educators do not practice in their supervision what they (hopefully) teach in their classes. They are concerned with techniques rather than with attitudes, with content rather than with feelings, with specific responses

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rather than with the relationship. They are evaluative, diagnostically oriented, and judgmental rather than accepting, understanding and therapeutic. This is a serious indictment of supervision, yet it appears to be justified. The results of the study point to a number of questions or problems which must be raised and considered.

The Nature of Supervision

The first is the question as to what supervision is. Is the supervisor-student relationship a teacher-student relationship, or is it a therapist-client relationship? Most would agree that it is not, or should not be, a therapist-client relationship. Arbuckle (1963), however, feels that the supervisor should function primarily as a counselor rather than as an educator. Making the supervisory session a counseling or therapy session is to impose counseling on a captive client. The purpose of supervision is not counseling or psychotherapy with the student. Is it, then, or must it be a teacher-student relationship? Many would be ready to agree that supervision is or should be a learning situation. Is supervision the same kind of teacher-student relationship found in the usual classroom, but on an individual basis? This is apparently the concept accepted by counselor educators, if we can judge from the Walz and Roeber study. The emphasis is upon techniques of how to do it, resulting in directing, correcting, informing. It is a rational or intellectual process. But, as Sanderson (1954, p. 208) notes, such supervision is not likely to contribute to the student's personal and professional growth, even though it may enhance his knowledge. Supervision is, or should be, more than this, as has been recognized by those who have been concerned with supervision of psychotherapy.

Supervision, while not therapy, should be, like all good human relationships, therapeutic. Supervision is a relationship, which is therapeutic, and in which the student learns. But the learning is not the kind of learning which takes place in the usual classroom. It is more like the kind of learning which takes place in counseling and

psychotherapy. It is concerned with the development of sensitivity in the student, of understanding and the ability to communicate that understanding, of therapeutic attitudes, rather than techniques, specific responses, diagnostic labeling, or even identifying or naming presumed personality dynamics in the client.

The supervisory session falls between teaching and counseling. It should not be an individual lecture to the student, nor a Socratic dialogue. It may be true that at times the student needs specific information, and, of course, this may be given as a part of supervision. But this is a minor aspect of supervision, as it usually is in counseling. On the other hand, it is true that students in a practicum, even when it comes after a full year of graduate work as it usually does at the University of Illinois, are far from completely prepared in terms of knowledge and background to handle all the problems which arise in counseling. They need information and knowledge of the kind obtained in didactic courses. But this is not the function of the individual supervisory process; moreover, it would be inefficient to include it. There are deficiencies which are present in all or most students, which are more efficiently, and effectively, dealt with in a regular class situation. My solution to this problem is to conduct regular class sessions for all practicum students. Problems arising in individual supervisory sessions can be brought up in the class since they often represent common problems.

The fact that the supervisor is the instructor in the group setting may appear to have some disadvantages. It would certainly militate against the supervisor counseling the student. But the advantages of the supervisor being the instructor include his being able to relate the class lectures and discussions to the current needs and problems of the students as they appear in supervision. It also allows him to keep the supervisory sessions from being lectures. A problem which may occur with some students involves their seeing the supervisor as an instructor and expecting

lecture or didactic relationship in supervision. But this is easily resolved with a little structuring to the student.

Supervision As An Influencing Process

If the supervisory situation is not therapy, and is not didactic teaching, then how is it conducted? We assume that it is directed to the development of behavior changes in the student—that it is an influencing situation. The supervisor who may claim, to himself as well as to students, that he has no biases, or point of view, or theoretical orientation, and disclaims any desire to influence the student's approach in counseling, is deceiving both himself and the student, since his supervision will show his biases or point of view. But not only is he deceiving the student, he is also confusing the student, who may not be aware of the source of his discomfort, although I have observed that often he is. It would appear to be better that the supervisor recognize and explicitly state his bias so the student will know where he stands and what is really expected of him. The supervisor, as the therapist, should be congruent, or real, in the supervisory relationship, and not attempt to play the role of being unbiased and objective with regard to various counseling points of view. This means, as I have pointed out elsewhere (Patterson, 1959, p. ix), that the practicum should be—and actually is—limited to one particular approach to counseling—that of the instructor and supervisor.

Direct Control of Student-Counselor Behavior

There is always an influencing process in supervision. The question, in addition to whether such influence is recognized and accepted, is the nature and goals of the influence. One approach is the direct control of the specific behavior of the student—his techniques, methods, and procedures. One example of this kind of influence is illustrated in the article by Korner and Brown (1952). They report the following interchange which was overheard over a sound system:

Client: My mother does some of the meanest things to me, but . . .

Counselor: You don't like your mother.

Client: Well, I don't see why she is so unfair to me, but I . . .

Counselor: She makes you very angry at her. Sometimes you are sure you hate her.

Client: Well, I . . . I . . . guess but I . . .

Counselor: And it makes you feel awful to hate her.

The supervisor was naturally disturbed by this, so he went to the counseling room, knocked on the door and said to the student counselor: "Look, your client is trying to tell you that she is ambivalent, that she also loves her mother. Now go back in there and help her to express it."

Parenthetically, it is interesting to speculate on what might have happened, or what the supervisor might have done, if the student (as he should have) had refused to come to the door. But the authors use this situation to illustrate the need for a method to communicate with the student during his counseling, and they did develop such a device, by which the supervisor could communicate with the counselor during the counseling session.

It might appear that this would be a desirable method of supervision. But I would suggest that it is undesirable, and that it should be unnecessary. Any student who would function in this way is, in my opinion, not ready for a practicum, or should be prepared better for his first interview by the practicum supervisor or instructor. Perhaps these are the kinds of students with which the supervisor should use adhesive tape rather than recording tape—or in addition to recording tape. The remedy for such a situation is not a mechanical third ear, by which the supervisor can control the student, but better preparation of the student. It should be obvious, too, that the supervisor cannot monitor all the interviews of all his students.

The use of such a method of supervision raises a basic question about the nature of supervision. In my opinion this approach is undesirable because it takes the responsibility for the client away from the student

and gives it to the supervisor. But the supervisor is not the counselor, and the student must be given responsibility for his clients. Only in this way can he develop independence and confidence in himself. If the student is adequately prepared it is rare that any irreparable damage can be done to the client in a single interview, before the supervisor can intervene if necessary. It is recognized that the supervisor does have a responsibility to the client, but his major responsibility is to the student and his growth and development as a responsible, independent counselor. The function of supervision is not for the supervisor to counsel the client through the student, or with the student as described by Cottle (1952, 1955).

Influencing by Creating an Atmosphere for Growth

There is another approach to supervision which fosters responsibility and independence in the student. This is an approach which avoids those methods or techniques which we know are not conducive to learning and which have thus been abandoned in the practice of counseling and psychotherapy—advising, correcting, pointing out errors, etc. These are not effective in supervision for the same reason that they are ineffective in counseling—they are threatening. Supervision, like counseling, must provide a nonthreatening, accepting and understanding atmosphere.

But we now face an apparent dilemma. How can the supervisory session be non-threatening, especially when the supervisor evaluates the student to give a grade and/or a recommendation as a counselor, and when the supervisor has a definite point of view or bias? These are reasons why the supervisory relationship is in some respects an even more difficult one than the counseling relationship.

To begin with it must be recognized that threat cannot be entirely removed in the supervisory relationship any more than it can be in any other situation. The playing of his tapes for someone else is threatening to the student. How many instructors play

their own tapes to others, including their students? Pierson (1950) noted long ago that "insecure students may find it impossible to face recordings of their own interviews." This is perhaps not so much a problem at present, since recording of interviews is accepted by students as part of their training, and usually they have had some experience with doing this prior to the practicum.

But evaluation cannot be eliminated. The supervisor does evaluate, must evaluate, and should evaluate. No one is in a better position to evaluate the student-counselor than the practicum supervisor. This is part of his duty as an instructor. He cannot abdicate this to the student himself—this also is threatening to the student. Nor should the students be required to grade each other—this is more threatening than being graded by the instructor. I have seen classes of students so threatened by this requirement that they were unable to relax and open up in class discussion. Evaluation is also an obligation of the instructor to the profession and to potential future clients of the student-counselor. I see no way for the instructor to avoid evaluating his students. Arbuckle (1963) suggests having two supervisors, one who evaluates and one who only supervises. But this is not only impractical but probably would not remove evaluation from the supposedly non-evaluative supervisor. After all, the student will probably need or wish to use him for a reference, so that he is still an evaluator.

The necessity for evaluation must be faced with the students, and discussed with them. Students may be told that since they are advanced graduate students and have been selected for the practicum they should not worry about failure in the course. The use of grades S and U rather than the usual letter grades may help reduce the threat of grading by the instructor. After discussions I have found that the threat of grading is not a problem or an inhibiting factor, and that students enter into the course realizing that the emphasis is upon helping them develop as counselors.

But what about the contradiction between the instructor's teaching a point of view, and the freedom of the student to choose his own approach to counseling? This problem is similar to that occurring in counseling, when every counselor has a value system, goals for the counseling process, and a method or point of view.

It may be pointed out that as the client has his choice of therapists, so does the student have his choice of instructors. He may choose a college or university on the basis of its known point of view. Within the school he may—or should be able to—choose the instructor with whom he takes the practicum. The student in taking a course in effect enters into a contract. This is why it is important that the nature of the course and the point of view of the instructor be clear and recognized, so that the student knows what he is contracting for. And just as the supervisor, or any counselor or therapist, must be committed to a method or point of view if he is to function effectively, so must the student have a commitment to a point of view or approach if he wants to learn it (Ekstein and Wallerstein, 1958, p. 56). As Ekstein and Wallerstein (1958, pp. 63-64) point out, "the belief that a young psychotherapist ought to be schooled in a variety of methods, very different from one another, in order thus to acquire a broad-minded research attitude and to avoid premature commitment to a particular point of view, sounds ideal but is actually unfeasible, and nihilistic in its effect. It stems, we believe, from ignorance about the nature and training for psychotherapeutic work."

There remains a problem here, nevertheless. I agree with Rogers (1961, p. 287) that one cannot impose one's feelings on one's students. But, as Rogers also recognizes, the instructor must be "the person that he is," and must express his attitudes, feelings, and beliefs. I do not feel that it is possible to be as unconcerned as Rogers appears to be (or to claim to be) about the outcomes of counselor training. If the instructor believes his approach is best—and if he doesn't he wouldn't have accepted

or adopted it and continue to practice it—then he must be concerned about whether his students are able to accept and adopt it or not; and if he is concerned, this is going to influence his teaching and supervision.

In practice there is usually little difficulty, for several reasons. First, the emphasis is upon basic assumptions and attitudes, not upon specific methods or techniques. The student is not being forced to conform to a rigid system, but is helped to find his own style of counseling within the framework of the attitudes which are considered the necessary and sufficient conditions for therapeutic personality change (Rogers, 1957). Second, most students either have already essentially accepted the client-centered point of view and desire experience with it, or find that it is acceptable to them once they have acquired an understanding of it. Third, the student who has a commitment to another approach, or who has no commitment and is reluctant to identify himself with a "school" or a systematic approach, is not pressured or coerced, but is accepted and encouraged to discuss his attitudes and doubts, while being exposed to the instructor's point of view. There are limits to the student's freedom here as in all other human behavior. A student is not permitted to work with clients on a basis or with an approach which is inconsistent with the point of view of the course. Again, by the nature of previous preparation, selection (including self-selection) and entrance into a practicum with an explicit orientation, there has never been a situation where a student has (as he would be permitted to do) withdrawn from the course.

Supervision is a relationship. And as in any relationship, including the counseling relationship, there is an element of threat. In fact, it is more threatening than many other relationships. This is something that must be recognized, since we know that threat inhibits and restricts learning, that it leads to defensiveness and resistance. If, then, we expect the student to change, to grow and develop, we must reduce

threat to the minimum. This suggests that the methods or techniques of supervision are more similar to those of counseling and psychotherapy than they are to subject matter or didactic instruction.

Methods and Procedures in Supervision

In the first place, the supervisor listens, rather than lectures or talks. He listens to the student, when he talks about his perceptions of his client and of his perceptions of his own approach to and activities in the counseling session. He also listens to the student's tapes. He may listen for long periods of time, without comment, unless the student stops the tape and raises a question. I agree with Anderson and Bown (1955) who comment that "technique orientation is fostered . . . by the supervisor who reacts to the recording in terms of each and every counselor response, e.g., 'You missed that feeling,' or 'That was too much of an interpretation.'" I also would suggest that such an approach to supervision does two other things which are detrimental to the growth of the student. It creates a threat to the student, who becomes fearful of constant or continual criticism and the pointing out of errors. It also fosters dependence on the supervisor. The student does not develop the habit of self-observation and self-evaluation, but depends on the supervisor to evaluate his performance. In my supervision I stop the tape usually only when I feel the student has made a serious error, i.e., has missed completely what the client is saying or experiencing, when I do not understand what prompted the student's response, and when I feel the student has understood the client and communicated this understanding exceptionally well. The student controls the supervision, in terms of what tapes, or parts of tapes, he uses, and where the tape is stopped for discussion. I do, however, review at least briefly the status of each client with whom the counselor is working.

When the student does not feel threatened, when he understands that the supervisor is not going to analyze his every

response, and when the supervision is structured so that the student knows he is to evaluate himself and is expected to indicate his own questions or doubts about his performance, then the supervisory session becomes, like a counseling session, one in which the student takes the responsibility for himself and the session, and the supervisor, as does a counselor, follows the student in his self-analysis. Very often no comment is necessary by the supervisor; the student will comment on his own performance. Often both the supervisor and the student may listen in silence for long periods. The student, listening to himself in the presence of another person (the supervisor), benefits as does the client, listening to himself in the presence of the counselor, often with little response except attention from the counselor. Students are encouraged to listen to their own tapes alone or with each other, but there is something about the supervisory relationship, as in the counseling relationship, which makes the situation different than listening to oneself, as counseling is different than talking to oneself. The student, if not interrupted, lectured to, criticized, with his mistakes being thrown in his face, will take the responsibility for analyzing and evaluating himself.

In this kind of supervisory situation I find no place for the kind of evaluation and analysis described by Anderson and Bown (1955). As in counseling, if the supervisor sets the stage, the student will conduct his own analysis and evaluation, and develop understandings of his counseling, without the probing and interpretations which Anderson and Bown utilize. It is interesting that these client-centered counselors do not feel they can be client-centered in their supervision. Why can't we have as much confidence in the ability of our students to develop understandings of their counseling behavior as we have of our clients to develop understanding of their behavior? This does not mean that the supervisor is not honest, direct, and open in his relationship with the student. As Rogers points out in his comment on

the Anderson and Bown paper, there is a difference between evaluation and the expression of a personal feeling by the supervisor as his feeling. He suggests that the essence of the Anderson and Bown approach is that the supervisor understands the student's feelings and communicates this to the student. I would suggest that this can be done in a simpler, less threatening way than Anderson and Bown appear to do it.

What else is there to supervision? To me, there is nothing else. The supervision creates an atmosphere or an environment, as free of threat as possible, which the student can use to grow in understanding and in skill in counseling. The focus is upon helping the student to understand the feelings and experiencing of the client at each moment of the interview, and to communicate this to the client. This is the essence of counseling, and this is what supervision should seek to develop in the student. The approach to supervision which I have outlined seems to achieve this goal.

Summary

Supervision is, then, not teaching, nor is it counseling or psychotherapy. It is, or should be, a learning situation. But the kind of learning is closer to that which occurs in counseling and psychotherapy than it is to classroom learning. Therefore, it follows that the supervisory situation and methods should be more like those of counseling and psychotherapy than didactic teaching. The conditions of supervision which appear to achieve the desired results in student growth appear to be those which are conducive for client growth in counseling. The supervisory relationship should be one in which the student is not threatened, but is accepted, respected and understood, so that he may be free to analyze and explore his relationships with his clients and to modify and grow in such relation-

ships. The problem of evaluation of the student by the instructor cannot be avoided, and thus must be faced with the student to reduce as much as possible the threat which it involves.

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The Presentation of Test Information to College Freshmen¹

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This is an investigation to determine if any one of four methods would be most effective in interpreting test results. The degree of counselor and student interaction and participation varied in three; while in the fourth there was none, since results were mailed. Immediately after the interview and one week later 156 students completed the Counselor-Inventory Rating Scale to express attitudes toward counselor and value of receiving the information. Conclusions are: (a) No significant differences on attitudes toward the counselor among the four methods; (b) When attitudes of students toward counselor were analyzed among the four counselors there was a significant difference; (c) In attitudes toward the value of receiving test information there was significant difference between students who received their results through the mail and those who did not.

The presentation of test results by a counselor should benefit the client. Wood (1953) notes that too frequently tests are administered and the results are left in files rather than being presented to students. Wiley and Andrew (1953) state that understanding of test results is essential in helping students to understand themselves. Rogers (1954), Lane (1952), Dressel and Mateson (1950) have investigated the effects of different means of presenting test results to clients.

In general, the few available research studies on method of presenting test results in counseling do not permit definite conclusions about the more desirable methods. This study was therefore undertaken to explore further the matter of method in test presentation. Specifically, the purposes of this study are: (1) to determine the relative effectiveness of four methods used in interpreting test results to college freshmen; (2) to compare the recall of test in-

formation with actual scores after a period of one week had elapsed; and (3) to analyze student attitudes towards the test interpretation method used in presenting the scores.

Design and Procedure of the Study

Method

Four methods were designed for the study, each followed the theoretical characteristics of the interview: rapport, structuring, discussion, and synthesis. The degree of counselor and student interaction and participation varied in Methods A, B, C, and D.

Method A: The counselor presented the meaning of each test and referred to the student's standing on his test profile. The counselor answered questions, made suggestions and referrals, and gave his reactions to the student's performance.

Method B: The counselor encouraged student participation by having the student rate himself on a test profile form prior to receiving the actual scores, and by allowing the student to select the order

¹Abstracted from the author's doctoral dissertation, 1959, which was completed under the supervision of Dugald S. Arbuckle.

of tests to be interpreted. The counselor expressed no reactions or opinions to the student's performance but concentrated on eliciting student feelings and attitudes toward the actual test scores and the self-rating.

Method C: The counselor selected the order of tests to be interpreted and indicated the student's results. He encouraged participation by exploring, clarifying, and reflecting the student's attitudes and feelings about his scores. The counselor made no evaluations or judgments concerning the scores or toward the student's feelings about his standing.

Method D: There was no discussion of test scores by a counselor since students were mailed a brief summary of the meaning of each test and a test profile on which the scores were plotted.

In general then, all methods were primarily explanatory. One (D) offered only written explanation without exchange of view. All other methods involved conversation between counselor and client and thereby permitted some exchange of views. Method A required that the *counselor* be *dominative* and *evaluative*. Method C also required that the *counselor* be *dominative* at least with regard to the test order, but it also considered the *reflection* of attitude in the course of the interview. Method B required that the student be *dominative* and involved attitude, but from a *set* arranged by prior student consideration and estimate of his test results. Throughout this paper we shall adopt the following denotation of method:

Method	Denotations of test interpretations in the counseling setting
D	Written
A	Counselor dominative and evaluative
C	Counselor dominative but reflective
B	Student dominative out of learning set

In order to be certain that the four counselors were adhering to the structure of each method they were supposed to employ, they recorded at random three interviews for each method. The taped sessions were later

reviewed and the performance of each counselor rated on the Counselor Evaluation Check List. The results of these ratings indicated that the counselors presented test results within the framework of the designated method.

Subjects and Tests

One hundred and fifty-four college freshmen at the Boston University School of Education participated in this study. A total of thirty-eight students were assigned to each of Methods A, B, C, and forty students to Method D.

All tests were administered during the first month of the academic year, with the exception of the College Board Examinations which had been taken prior to admission to the school. The battery of tests included: Otis Quick-Scoring Test of Mental Ability (Gamma), Kuder Preference Record (Form BM), Cooperative English Reading Comprehension (C₂T Form Y), Minnesota Teacher Attitude Inventory, and the Heston Personal Adjustment Inventory. The scores of each test were corrected to stanine scores which were then categorized as follows: 9 and 8 represented High; 7 and 6 Above Average; 5 Average; 4 and 3 Below Average; and 2 and 1 Low. The stanine scores of each student were represented in profile form. The test profile helped to standardize terminology, gave uniformity to all methods, and enabled students to see their performance compared to that of their classmates.

Assignment of Subjects to Methods and Counselors

Age, sex, residence (commuting or dormitory status) and the raw score on the Otis Quick-Scoring Test of Mental Ability were the variables considered in assigning students to one of the four methods. Later statistical tests of method differences for each of these variables indicated that the desired randomization did, in fact, occur.

These same variables were used in assigning students in Methods A, B, and C to one of the four counselors presenting test information. Later tests showed that

the counselors' groups were homogeneous in these regards also.

Instruments

Two new instruments were designed to carry out this study.

Counselor-Interview Rating Scale: This scale consisted of thirty-five statements, nineteen measured attitudes toward the counselor, and sixteen measured attitudes toward the value of receiving the information. The student indicated the extent of his agreement or disagreement with each statement on a four-point scale. Those students assigned to Method D responded only to those statements pertaining to the value of receiving test information. Students in the other groups completed the scale immediately following the presentation of the test results and one week later as well.

Attitudes toward the counselor were inferred from items like these: "I think the counselor was helpful in assisting me to understand my test results." "I felt free to say anything I wanted during the interview." "I felt that the counselor solved my problems." Attitudes toward the value of receiving the test information were inferred from items like these: "I feel that the test information will help me to understand myself better." "I felt that learning about my traits was a complete waste of time." "I feel that it was of value to learn

how my traits compared with other students."

Interpretation Form of the School of Education Test Battery: One week following the time that a student was given his test results by mail or by personal interview the Counselor-Interview Rating Scale and the Interpretation Form were mailed to each student for completion.

The latter form presented a brief summary of the meaning of each test and a test profile which the student was asked to recall and indicate where he had scored.

Statistical Analysis and Results

Student Opinions About Counselors and Tests

The data for analysis were the early and later ratings of the Counselor-Interview Rating Scale. Numerical values were assigned to the four-point rating scale and separate scores obtained for each student on the two parts of the scale, Attitudes Toward Counselor and Attitudes Toward the Value of Information. The correlations .76 based on the scores of the 114 students who met with a counselor, and .75 based on the scores of the total group of 154 students who received their test results show a rather high degree of consistency in rating over a one-week interval.

Analysis of variance was the statistical procedure used to determine if there were

Table 1
Immediate and Delayed Scores on the Counselor-Interview Rating Scale for the Four Methods

Method	Attitudes Toward Counselor				Attitudes Toward Value of Information			
	Immediate Mean	Reaction S.D.	Delayed Mean	Reaction S.D.	Immediate Mean	Reaction S.D.	Delayed Mean	Reaction S.D.
A	17.50	5.49	17.00	6.38	24.32	7.98	25.00	6.90
B	18.18	5.38	17.66	5.62	26.47	6.24	25.89	7.35
C	18.16	5.15	17.87	5.58	23.53	7.30	23.92	7.93
D					22.20 ^a	7.20	20.55 ^b	6.45
Total	17.95	5.34	17.51	5.86	24.10	7.18	23.80	7.16

^aSignificant .01 level with Method B
^bSignificant .01 level with Method A and Method B

significant differences between the four methods. Since the null hypothesis was rejected, *t* tests were employed to determine which methods were significantly different from the others.

The students assigned to Methods A, B, C showed no significant differences in their attitudes towards counselors either immediately after the conference or the week following the interpretation of their results (Table 1). Nor did these students under Methods A, B, and C show any significant difference in attitude toward the value of the tests at either testing time. On the other hand, Method D (tests received by mail) was, in some instances, significantly less effective, and this difference became greater after one week. The mean difference between the initial mean values for Methods B and D was significant at the .01 level; and between Methods A and D, and between B and D at the same level for the later mean differences. From these findings it is concluded (1) that the methods used here by the counselors had little differing effect on student attitudes toward the counselor and toward the considered value of the tests and (2) that students who did not meet with a counselor found the test information to be of least value.

Further investigations of the data were made to determine if the difference in responses might have been influenced by such factors as the counselor himself, and sex and/or residence status of the student. Of the three variables only one was significant, the counselor. Expressed attitudes during the one-week interval were positive for two counselors and negative toward the other two. Since method of presentation was discounted it was concluded that the counselor himself was a major influence in the formulation of attitudes toward the counselor.

Recall of Test Profile

One week after initially seeing their test scores, students, in most instances, did quite well in recalling their test scores.

While test interpretations via mail re-

sulted in the best recall, mailed profiles could have been easily copied, so in the following analysis the mail method (D) is excluded. If the assumption is made that the higher the correlation between actual tests and recalled test scores the better, then Method B was associated with 9½ first places, A with 4 and C with only 1½. Counseling effect seems to last longer if it is student dominative after a learning set for test interpretation has been created.

Conclusions

The purpose of this study was to compare four methods used in presenting test results to freshman students. In addition to the method of presentation the investigation was concerned with the value of the entire experience, especially from the student's point of view. The evidence showed that:

1. Any of the four methods may be used effectively but that students who received their test results through the mail rather than from a counselor considered the results to be less valuable to them.
2. The extent to which student participation was encouraged or minimized by the counselors employing Method A, B, or C did not make a significant difference in their attitudes toward the counselor either immediately or one week later.

The results of this study have brought out the need for evaluating some of the practices that are considered part of the college experience. A review of many college orientation programs shows that testing is a major activity but whether students should be given their results is less clearly known.

The fact that no clear differences were found among counselor methods of presentation gives support to the idea that no one counseling technique lends itself to all counseling situations and it is not what a counselor does as much as what he stimulates his counselee to feel, to do, and to say that is important in the relationship.

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Toward a Process Model of Psychological Health

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The problem of defining mental health is approached heuristically through a process model derived from observations of manifestations in patients of the two basic drives toward homeostasis and differentiation. The reciprocal relationship between these drives is conceptualized through an application of Lewinian constructs leading to the proposition that psychological health is a function of the ratio of differentiating to homeostatic process. The model clarifies the distinction between health and maturity and has implications for psychopathology and for therapeutic process.

In recent years, increasing attention has been directed to the problem of defining mental health. In his excellent paper on this subject, Shoben (1957) pointed out that there has been much more conceptual delineation of mental illness than of mental health. This may be due to the fact that the processes of psychological functioning are placed in relief and thus made visible through study of psychological deviance. When psychologists turn to the study of psychological normality, process usually ceases to be the focus, and reversion to a phenotypical level occurs in the form of emphasis on definitive attributes. The psychologist's difficulty in achieving conceptual perspective on psychological health, as compared to psychological dysfunction, may be seen as analogous to man's difficulty in adopting a scientific perspective on psychology as compared to biology, physics, and astronomy. The nearer the subject matter approaches the scientist's sense of personal identity, the more the conceptual issues become confused in matters of values. In the area of psychological health, the resulting conceptual breakdown is manifested in a resort to statistical and cultural norms, which are generally recog-

nized as inadequate for the task at hand. Formulations in terms of statistical or culturally relativistic norms obviously do not illuminate the processes of healthy psychological functioning as differentiated from pathological functioning. The purpose of this paper is to propose that resolution of the current confusion be sought through attempted formulation of a conceptual model of healthy psychological functioning in terms of process, from which the pathological is a deviation in a distinguishable direction. The further purpose of this paper is to present a few heuristic notions toward such a model, making use of the time-tested concepts of homeostasis and differentiation.

The Model

For several decades, theories of personality have provided two contrasting concepts of the motivational mainsprings of human functioning. Freudian theory postulated a homeostatic drive from which all human behavior derives as a striving for discharge of tensions and restoration of psychic equilibrium (Fenichel, 1945). Self-actualization theorists (Maslow, 1954; Rogers, 1951, 1959) have increasingly focused attention on the organismic tendency toward progressive differentiation. There is a wealth of clinical and experimental data to support the existence and the basic significance of both phenomena.

¹The author acknowledges with gratitude the encouragement given by Carl Rogers and Rollo May.

As a practicing psychotherapist for twelve years, I have been fascinated by my observations of the various manifestations of these two basic drives in my patients. These observations have led to the thesis of the present paper; namely, that within the individual personality the homeostatic drive and the drive toward differentiation exist in a reciprocal relationship to each other, and that psychological health is a function of the balance between them.

For clarification of the dynamics of this dialectic process, it is helpful to use tools provided by Lewin, in his topological representation of the person and in his principles of vector psychology (1935, 1936). The nature of our problem necessitates the introduction of the temporal dimension into Lewinian constructs which are systematically ahistorical. To do this, consider the longitudinal life stream of the individual as a series of flat, round discs, each representing the state of the person at a momentary point in time. Each disc is describable topologically as an organization of interdependent regions, separated by permeable boundaries. Dynamically, the organization is an energy system, involving variable degrees of tension within the regions, variable degrees of firmness of boundaries, and variable degrees of equilibrium for the system as a whole. Certain conditions of disequilibrium, defined in terms of regional tension states and boundary resistance states, lead to structural reorganization, producing "a new state of equilibrium" (1935, p. 58).

Our problem is the question of the directional determination of the "new state of equilibrium"; that is, whether it is in the direction of dedifferentiation or increased differentiation. If dynamic determination derived only from one fundamental homeostatic drive, the principle of parsimony would lead to the expectation of a prevailing tendency toward the approximate reinstatement of a previously existing level of homeostasis. Yet, increasing differentiation is more the rule than the exception. As Lewin has stated, "One of the most important dynamic differences between

child and adult is that the person of the child is less differentiated into part regions" (1936, p. 182). This implies clearly that the prevailing tendency is toward equilibrium at a more differentiated level. The tendency toward dedifferentiation seems to be primarily a function of the quantity of tension and secondarily of the insufficient firmness of boundaries within the system. Lewin states, "Dynamic walls which may suffice to separate part systems to a high degree, if the forces in question are small, can become relatively unimportant in the face of the strong forces which arise during a state of high tension. For this reason a great increase in inner tension means *ipso facto* a dedifferentiation of the person" (1936, pp. 188-189). Lewin refers to both experimental and observational evidence for the inference that high tension states produce dedifferentiation. On the other hand, it is a very common observation in psychotherapy that high tension states may also lead to increased differentiation, in the form of new insights and expanded awareness. The model here proposed provides a basis for possible resolution of such contradictions.

Proposition one is that the directional determination of the structural reorganization is derived from a reciprocal interaction of the two fundamental drives, toward homeostasis and toward differentiation, with the exact nature and outcome of this interaction further determined by all those intrapsychic and environmental forces which momentarily strengthen or weaken each of the two drives.

This model of psychological dynamics leads to the *second proposition* that psychological health is a function of the ratio of differentiating process to homeostatic process. Stated simply, the healthy personality is the growing personality. Personality growth is not a linear function, but proceeds by way of reorganization into a more differentiated pattern, followed by restoration of equilibrium, and then more differentiation. The personality is less healthy insofar as the differentiating process becomes subordinated to a homeostatic process, leading

either to relative maintenance of the status quo or to dedifferentiation.

Implications for Developmental and Clinical Psychology

Some speculations about the implications of this model for developmental and clinical psychology are possible. The well-known emotional dependence of the infant and young child on tactual stimulation and empathic interaction from the mother may be viewed as a lack of capacity for independent homeostatic regulation. The child requires these maternal contributions to the maintenance of sufficient equilibrium that the differentiating process may proceed in a relatively unimpeded spiral. The drive toward differentiation manifests itself in the unfolding of potential patterns of functioning in a fairly autonomous way so long as the base of fairly stable organization is preserved. The psychological dependence of the child is a function of the weakness of certain intra-psychic boundaries and the consequent inability to maintain the homeostatic base autonomously. The distinction between psychological health and psychological maturity is thus clarified. The maintenance of a D/H balance approaching 1.0 represents health; the *independent* maintenance or internal regulation of a D/H balance approaching 1.0 represents maturity. Thus, a child may be healthy but immature.

Healthy development of the personality over the years of childhood involves the gradual establishment of a basal organization of such stability and resiliency that the ongoing process of differentiation unfolds without unduly disrupting the basic homeostatic state. Gradual solidification of the basic homeostatic state makes possible increased personal autonomy in the sense of reduced dependence on others for homeostatic regulation.

This process of gradual, even growth and reorganization describes an ideal condition which, in actuality, seldom prevails. Instead, the D/H balance may be disrupted in various ways. Insufficient homeostatic regulation (*inadequate mothering*) may re-

sult in a centering of organismic energy on the maintenance of a steady state, with a resultant decrease in the D/H ratio. It may be hypothesized that this condition leads to constriction, phobic symptoms, or even to autism. This line of thinking is consistent with such experimental findings as those of Harlow on the rhesus monkey (1958, 1962). The situation of over-protective mothering may be viewed as one in which the child's need for homeostatic regulation is gratified but his drive toward differentiation is punished. This also results in a decreased D/H ratio, but with the difference that more organismic energy is free for attempted corrective development. The assumption here is that, for any given personality, the ideal pattern of unfolding differentiation is unattainable because environmental forces are never completely attuned to intrapsychic needs. It is further assumed that the organism is capable of an abundance of substitute channelizations of the differentiating process in the striving to achieve an optimal D/H balance, and that these patterns of striving constitute the developing personality structure and, in instances of severe conflict, the formation of symptoms.

In terms of organismic economy, the purpose of a symptom is to preserve the equilibrium of the basal organization at the least possible cost to the differentiating process. This cost varies and is, in some cases, very great, resulting in rigidification and a retardation of the growth process. The breakdown of a symptomatic structure releases anxiety at the experiential level, for anxiety may now be defined as a subjective experiencing of the interaction between the two basic drives as reorganization is occurring in either a differentiating or dedifferentiating direction, with the intensity of the anxiety proportional to the degree of reorganization. It is well known clinically that intense anxiety precedes the onset of a psychotic episode. On the other hand, as Rollo May has written, "Anxiety occurs at the point where some emerging potentiality or possibility faces the individual, some possibility of fulfill-

ing his existence; but this very possibility involves the destroying of present security, which thereupon gives rise to the tendency to deny the new potentiality" (1958, p. 52).

In psychotherapy, anxiety is released as the symptomatic structure yields, and anxiety is often very intense just before a major breakthrough of insight and/or growth. The double function of the therapist is to stimulate the drive toward differentiation while simultaneously providing an emotional support which reinforces the homeostatic balance, thus protecting the patient from a sudden, rapid dedifferentiation as old symptoms are relinquished.

This paper presents, for heuristic purposes, a conceptual model of healthy psychological functioning in terms of process, from which the pathological is a deviation in a distinguishable direction. The model has wide unifying power and provides a framework for the study of significant problems.

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Kuder-Strong Discrepancies and Personality Adjustment

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Twenty-seven physically handicapped males in a Veterans Administration Hospital were given the Strong Vocational Interest Blank, Kuder Preference Record-Vocational, and the Minnesota Multiphasic Personality Inventory. The hypothesis under investigation was that the number of discrepancies between vocational interests as measured by the KPR and SVIB would be positively related to psychological maladjustment. There was a significant positive correlation between number of discrepancies and number of MMPI scales with t-scores greater than 65. Three individual MMPI scales (*D*, *Pd*, *Ma*) showed significant positive correlation with number of discrepancies. All interest areas produced discrepancies, but discrepancies in the Literary, Computational, and Mechanical areas showed the highest relationship to maladjustment. These findings were held to support the hypothesis. Theoretical and practical implications and limitations were briefly discussed.

A number of writers have suggested that discrepancies between the Kuder Preference Record-Vocational (KPR) and the Strong Vocational Interest Blank (SVIB) are meaningful and may have diagnostic significance in vocational counseling (Pater-son, 1946; Sinnett, 1956; Super, 1947). Studies of the relationship between these two interest inventories (Berdie, 1950; Pat-erson, 1946; Sinnett, 1956) show that the KPR is more sensitive to conscious attitudes and reflects more conscious stereotypes, while the SVIB appears to measure interests at a deeper, more stable level. These authors have supposed that a lack of agreement between these tests reflects self-delusion, distortion of the self-concept, or limited self-awareness. Moreover, personality the-orists such as Rogers (1951) have stated or inferred that distortions in the self-con-cept or limited self-awareness are signs and symptoms of psychological maladjust-ment. Thus, there is at least theoretical precedent for assuming a positive relation-ship between KPR-SVIB differences and the degree of psychological maladjustment. The present investigation was designed to test this assumption. Specifically, the

hypothesis under investigation was that the number of discrepancies between vocation-al interests as measured by the KPR and SVIB would be positively related to the degree of the individuals' psychological mal-adjustment. To these authors' knowledge, there is no previous data bearing directly on this question.

Procedure

Subjects: The Ss were 27 physically hand-icapped males in the Veterans Administra-tion Hospital, Houston, Texas, who had been referred by their ward physicians to the Psychology Service for vocational coun-seling.

Tests: All Ss were given the SVIB, the KPR, and the Minnesota Multiphasic Per-sonality Inventory (MMPI) as part of the counseling process. The SVIB was given following an initial one hour interview with the patient. The KPR and the MMPI were given one to three days later in a haphazard order. All testing was completed before the second interview.

Method: The SVIB and the KPR were matched in six interest areas on the basis

of Super and Crites' (1962) synthesis of interest factors. The senior author of this investigation made three additional matchings on a rational basis, mainly following Super and Crites' case history discussions. These matchings are shown in Table 1.

Table 1

Interest Areas Matched on the Kuder Preference Record and the Strong Vocational Interest Blank

Kuder	Strong
Mechanical	Group IV
Computational	Accountant Purchasing Agent
Scientific	Group I (except artist & architect)
	Group II
Persuasive	Group IX
Artistic*	Artist Architect
Literary	Group X
Musical*	Group VI
Social Service	Group V
Clerical*	Office man

*Rational matchings based on analysis of Super and Crites' (1962) case history data.

The SVIB and KPR scores in each interest area were classified as either high, medium, or low. The SVIB was scored according to the Darley and Hagenah (1955) method of pattern analysis. Interest areas showing primary or secondary patterns according to these authors were classified as high scores, while their reject patterns were classified as low scores. Interest areas which did not show either a primary, a secondary, or a reject pattern were classified as medium scores. For the KPR, scale scores above the 65th percentile were called high scores, scores below the 35th percentile were called low scores, and scores between the 65th and the 35th percentile were called medium scores.

This procedure yielded one SVIB and one KPR score in each interest area for each S. A discrepancy was counted for an S when his SVIB and KPR scores differed within an interest area. For example, two high scores in "literary" yielded no discrepancy (a score of zero), while a high score and a medium or low score yielded one

discrepancy (a score of one). No discrepancy was assigned a score greater than one, so that the possible range of discrepancies for each S was from zero to nine.¹

The MMPI provided a measure of psychological adjustment. It is generally accepted among counselors using the MMPI that the general or overall elevation of the scales is a rough index of adjustment; the higher the overall elevation, the greater the psychological maladjustment. Therefore, the number of scales greater than a *t*-score of 65 on the MMPI (1½ SD above the mean) was taken as an index of degree of maladjustment.

Results

The KPR-SVIB discrepancy scores were correlated with the number of MMPI scales above a *t*-score of 65 by means of the Pearson product-moment coefficient. This correlation ($r = .30, p = .06$) suggested a slight positive relationship between the number of discrepancies and psychological maladjustment. To assess this relationship more clearly, the number of discrepancies was correlated with Ss' scores on the individual MMPI scales. These correlations are presented in Table 2. Eleven of the thirteen correlations were positive in sign.

Table 2

Relation of Number of SVIB-KPR Discrepancies to Each MMPI Scale

Scale	<i>r</i>	Scale	<i>r</i>
L	.09	Mf	-.12
F	.23	Pa	.22
K	-.03	Pt	.18
Hs	.05	Sc	.19
D	.36 ^b	Ma	.26 ^a
Hy	.22	Si	.05
Pd	.41 ^c		

^a*p* .10 (one-tailed)

^b*p* .05 (one-tailed)

^c*p* .025 (one-tailed)

¹Taking account of the magnitude of the discrepancy by scoring a major discrepancy (one high and one low score) as two and a minor discrepancy (one high and one medium score, for example) as one did not change the analysis appreciably. The correlation between a simple frequency count of discrepancies and weighted discrepancy scores was .90.

Two of these coefficients reached an acceptable level of significance, the Psychopathic Deviate scale ($r = .41$, $p < .025$) and the Depression scale ($r = .36$, $p < .05$), while a third approached significance (Hypomania, $r = .26$, $p < .10$).

In order to evaluate the possibility that a discrepancy might be more important or more meaningful in one interest area than another, Ss in each interest area were divided into two groups; one group showed a discrepancy in the particular interest area and the other group did not. The mean MMPI adjustment ratings for the two groups were compared by means of the Krushal and Wallis H technique (Edwards, 1954) (the assumptions for t were not met by these data). These results are presented in Table 3.

One comparison was significant (Literary, $p < .05$) and two approached significance (Computational, $p < .10$; Mechanical, $p < .10$). There were two reversals; Ss with no discrepancies in Scientific and Persuasive had more MMPI scales over 65 than did Ss with discrepancies. Neither of these reversals was significant, however.

It can be seen in Table 3 that there was some variation among the interest areas as to the probability of a discrepancy arising. However, chi square analysis of the distribution of discrepancies across all interest

areas indicated that no one interest area was significantly more sensitive to discrepancies than any other area ($\chi^2 = 3.39$, $df = 8$, $p > .50$).

Discussion

These results favor the hypothesis of a positive relation between number of KPR-SVIB discrepancies and degree of psychological maladjustment. The obtained relationship was relatively small, but the general exploratory nature of the investigation, the small N , and the crudeness of the maladjustment index could all have reduced the magnitude of the obtained correlation. Furthermore, the fact that the Depression (D) scale was related to these discrepancies lends considerable weight to the hypothesis, since previous studies have found this scale to reflect, at least in part, the individual's general level of psychological adjustment (Brown & Goodstein, 1962; Schmidt, 1945).

The positive relationship between number of KPR-SVIB discrepancies and the Psychopathic Deviate (Pd) and Hypomania (Ma) scales permits a number of *post hoc* explanations. For example, the Pd - Ma combination has frequently been found to be associated with aggressiveness and hostile acting-out behavior (for example, Drake, 1956; Hathaway & Monachesi, 1951), so that Ss with higher Pd and Ma scores might

Table 3
Comparison of Mean Number of MMPI Scales Above 65
for Subjects with Discrepancies or No Discrepancies
Within Each Interest Area

Interest Area	No discrepancy		Discrepancy		H
	Mean No. of MMPI Scales over 65	N	Mean No. of MMPI Scales over 65	N	
			4.31	16	1.78*
			4.39	18	2.54*
Mechanical	3.09	11	3.57	14	.64
Computational	2.67	9	3.50	14	1.19
Scientific	4.08	13	3.88	17	.33
Persuasive	4.15	10	4.91	17	2.91**
Artistic	3.50	10	4.13	15	.54
Literary	2.80	12	3.83	18	.03
Musical	3.42	9	4.00	18	.48
Social Service	3.78	9			
Clerical	3.44				

* $p .10$ (one-tailed)

** $p .05$ (one-tailed)

be more prone to disregard instructions, be careless, or to deliberately distort test results than Ss with lower scores on these scales.

Even though roughly the same number of discrepancies occurred in each of the nine interest areas, Table 3 suggests that discrepancies in a few of these areas may be the most important in reflecting maladjustment. The Computational, Mechanical, Literary, and possibly the Persuasive areas showed evidence of being the most sensitive indicators of maladjustment.

Assuming that the SVIB reflects an individual's basic, experience-based interests while the KPR reflects his *perception* of these interests (a part of his self-concept), then discrepancies between these two tests would indicate self-delusion or a distortion of the self-concept. Rogers (1951) feels that when there is incongruence between the self and experience, there is psychological maladjustment. These results are consistent with this formulation. There is a possibility, however, that self-concept distortions would not always be psychologically maladaptive in the population of recently physically handicapped individuals used in this investigation. These distortions might reflect beginning changes in basic interest patterns to conform to the imposed physical limitations; such a change could be most adaptive. If such change were taking place, one would expect conscious attitudes and values to change more readily than unconscious or deeper ones. For example, a paraplegic who had previously satisfied his masculine strivings through performing "rough and ready" outdoor activities might adaptively learn to satisfy these strivings through coordinating or directing these same activities. Thus, his basic interest patterns might gradually shift without doing violence to his basic needs. Only retesting such patients after considerable time had elapsed would indicate whether or not the deeper, more stable interest patterns would change over the course of time. If such changes do occur, then both psychologically healthy and unhealthy individuals could be found showing large SVIB-KPR dis-

crepancies during the period of adjusting to their physical limitations. This would serve not only to attenuate the results to this investigation but also to restrict the generality of these findings to a physically handicapped population.

Two further avenues of research are suggested by these results. First, replication on a non-handicapped population might well show an even greater relationship between discrepancies and maladjustment. Second, they raise the question of the possibility of basic interest pattern change in Ss who are no longer able to function in their accustomed vocational roles due to physical limitations. Generally, these results suggest a possible new use for two old tools of vocational counseling.

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Kuder Neuropsychiatric Keys Before and After Psychotherapy¹

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The Kuder Preference Record was administered to a group of psychiatric patients before and after therapy. The Artistic, Musical, and Literary scales whose scores have usually been found to be elevated in these populations decreased significantly after the completion of "successful" therapy. The Social Service scores did not decline and the frequently found lower Mechanical scores did not increase significantly with therapy. Research implications are considered.

The fact that certain scales on the Kuder Preference Record Vocational are elevated among neuropsychiatric patients has been repeatedly reported (Feather, 1950; Forer, 1953; Gengerelli and Butler, 1955; Klugman, 1960; Newman, 1955; Princenthal, 1952; Stauffacher and Anderson, 1959; Steinberg, 1952; Triggs, 1947). The most frequently reported elevated scales have been Artistic, Literary, and Musical. However, all attempts to rank-order these elevated scales reveal disagreement in the order of rankings (Gengerelli and Butler, 1955; Klugman, 1960). The Social Service scale has often been reported as being elevated but not with the frequency of the aforementioned ones. At the other extreme, Klugman (1957) found statistically significant low scores on the Mechanical scale in psychiatric populations. However, of all of the studies using the Kuder with psychiatric patients, Klugman (1957) was the only one failing to report positive findings

with the elevated neuropsychiatric scales. Interestingly enough, research with the Strong Vocational Interest Blank (Darley and Hagenah, 1955; Tyler, 1945) has failed to find any corresponding relationships with psychiatric samples.

While the literature is saturated with studies showing elevated Kuder keys among psychiatric patients, no one has evidently bothered to explore what happens to these scales either during or after therapy. Forer (1955) found that Kuder scores change following vocational counseling; the present authors hypothesized that analogous but not necessarily isomorphic changes in the usually elevated scales might be generated during or after "successful" psychotherapy.

Method

Kuder Preference Records, Form CH (Kuder, 1948; 1960) were administered to thirty psychiatric patients before and after psychotherapy. The subjects were drawn from a population of hospitalized, ambulatory, white, male patients in the Veterans Administration General Medical and Surgical Hospital, Buffalo, N.Y. The method of sampling consisted of simply taking the consecutive admissions to the Neuropsych-

¹The authors wish to express their appreciation to Dr. Bruno Shutkeker and Dr. Martin Staiman for their cooperation in providing the patients necessary for this research, and to Dr. Herman J. P. Schubert and Dr. Bernard Yormak for their helpful suggestions and critical comments.

chiatric Service; the randomness of the sample was therefore as random as a series of consecutive admissions.

A multiplicity of diagnostic categories, ranging from mild neurotic to chronic schizophrenia, was represented not only among various patients in the sample but also within the clinical histories of individual patients. The length of therapy was also variable, ranging from six months to two years. In all cases, all patients received all forms of the locally available therapeutic procedures, e.g. individual, small and large group therapy, psychodrama, etc. The post-therapy Kuder was administered within one week of discharge.

Results

In accord with the findings of previous investigators, the Artistic, Literary, and Musical scales of the psychiatric patients were conspicuously elevated *before therapy*. Also consistent with previous reports, many of the Social Service scale scores were high, while the Mechanical scale scores were among the lowest on the profiles.

The nonparametric Tukey test (1959) was employed in analyzing the data. Following therapy the Music scale scores of the patients discharged as "treated and improved (*t* and *i*)" were significantly lower ($.01 < P < .05$). The same patients discharged as "*t* and *i*" also had significantly lower scores on the Artistic and Literary scales ($P < .05$). No significant differences were found on either the Social Service or Mechanical scales. In all cases the Validity scale scores on both pre- and post-therapy testings were within the acceptable range as defined by Kuder (1960).

Three patients were discharged as "treated and unimproved (*t* and *u*)" but as having received maximum hospital benefits. In these cases the scores which were elevated before therapy remained elevated after therapy.

Discussion

The most significant single result of the present research is that those Kuder scores

usually found elevated in psychiatric patients undergo a statistically significant decrease with psychotherapy. To be sure, a potentially confounding variable entering into the reduction in elevated scores is the possibility of a statistical regression toward the mean. It is felt, however, that the decreases in scores are too great to be accounted for in this way. Nevertheless, cross validation is both desirable and necessary.

All patients were initially elevated on at least two of the four neuropsychiatric keys; many were high on three of the four scales and some few were elevated on all four keys. However, the scores changed significantly on only Artistic, Literary, and Musical but not on Social Service.

At the present stage of knowledge about the Kuder as an instrument to assess psychotherapeutic progress, we neither know which of the various keys may be critical for a particular patient nor do we know how many of them may be elevated. We also know nothing of the psychodynamics involved in an individual patient's preference for a particular scale.

In addition to our lack of empirical knowledge, we also face a logical-theoretical problem. We know that psychiatric patients are elevated on these scales but not the converse: elevations on these scales do not necessarily mean that an individual belongs in a psychiatric population. For example, Meehl (1951) reported elevated Social Service scale scores in a group of social workers who scored very low on the psychotic keys of the MMPI. In logical terms, the problem can be defined as: all *X* is *Y*, but all *Y* is not necessarily *X*. Future research is needed to discover the amount of *Y* that is included in *X*.

Steinberg (1952) labeled the psychiatrically elevated Kuder keys "the escape scales"; and interpretation of our findings in Steinberg's terms would be that as psychotherapy progresses, a patient's need to escape from reality decreases, and, therefore, his scores on these scales decline. Steinberg suggests that the Kuder is a "more sensitive" test than the usually em-

played structured personality tests because the items are less likely to arouse defensiveness; it may be that this feature of the test enables it to tap psychotherapeutic progress. The nondiscriminative nature of the present data in terms of psychopathology allows neither for an assessment of Forer's (1953) statement of a positive relationship between degree of disturbance and Social Service scales scores nor of Patterson's (1957) conjecture that high Social Service scores indicated a reaching out for help by a severely disturbed person.

Klugman (1957) as well as Stauffacher and Anderson (1959) interpreted low Mechanical scale scores from psychiatric populations as a loss of contact with the male stereotype model of reality involvement. Sternberg (1956) failed to find a relationship between Mechanical scale scores and psychiatric population membership. The present research found moderately low Mechanical scale scores in the pre-therapy Kuder profiles but no significant increase in these scores on the post-therapy profiles. Further attention to this potentially relevant scale would appear warranted, however, especially in its relationship to progress in therapy.

Future research may be of considerable value in a number of other ways. For example, we have occasionally administered Kuders during the course of therapy and have observed a tendency for the elevated neuropsychiatric scale scores to decline as therapy progressed. However, our Ns were neither sufficiently large nor our statistical techniques sufficiently sensitive to reveal the gradual changes at a significant level. This approach warrants further exploration, with special attention to the dynamics involved. Illustratively, the patients with elevated Social Service scores who have been described by other authors as "reaching out for help" could be compared with a group of low Social Service scoring "non-reachers" before, during, and after therapy to investigate the possibility of differences in responsiveness to therapy, etiology, psychodynamics, etc.

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Comment on Two Articles

These two papers present, in a "leading-edge fashion," two facets of the relationship of interests to personality structure and behavior. What these two pairs of practitioner-scientists have recognized and investigated is, that one's interests and the vocational expression of these interests are inextricably a part of an individual's core of being, i.e., his self-concept in relation to his perception of his environment. Although there may be those who would cavil at the extension of usage of these two respected inventories (SVIB and KPR-C) this writer applauds the adventuresome application described in these two papers. Two such papers as these impel one's mental processes in many directions.

As a counselor I find myself taking exception to the use of the MMPI as "a measure of psychological adjustment." Users more commonly and accurately employ this instrument as an indicator of the presence of areas of psychopathology rather than as a basis for estimating the degree of adjustment. Examination of the interpretation of the elevations of the scores on the MMPI made this writer wonder from whose point of view psychopathology was being interpreted. The implication is that if both the Pd and Ma scores are elevated, then one can expect aggressive hostility irrespective of any other factors. If Karpman's definition is the point of reference, then this position may be justified. If, on the other hand, Cleckley's is used, it should not be surprising that those who have recently been through a physically traumatic alteration of their body image would have some psychic residuals such as those described by Cleckley as among the characteristics of the "psychopath." This may be what the authors had in mind when they suggest a follow-up study.

The use of the word "adjustment" as synonymous with "adaptation" was also disturbing to me. It is time we recognize whether we are dealing with the patient's adaptation or with the adjustment of the

patient. Hahn in his recent book, *Psychoevaluation* provides an explicit frame of reference for our rethinking. If one accepts the MMPI scores as an index of adaptation, for example, then the scores between $+1.5$ and -1.5 SD would be correlated with the primary areas of the SVIB and KPR-C. Instead, the authors take the extreme scores, giving the impression that they are really more concerned with the lack of rather than the amount of adaptive capacity in the patients. Their patients were referred for vocational counseling, which implies that the focus of attention would be on their readiness and potential for adapting to competitive society. However, the emphasis seems to be on problems remaining, i.e., their further need for adjustment.

In the Drasgow-Carkhuff study use of the term "neuropsychiatric scales" in presenting the results of the KPR-C appears premature and somewhat misleading. This commentator is not aware of any evidence which firmly establishes such keys for the KPR-C. Nonetheless, this is an idea that merits some research.

The real impact of these papers lies in their suggestions and suggestiveness for further research. The Pool-Brown paper, in accepting the KPR-C scores as reflections of the individual's self-perceptions, leads the reader to some interesting speculations. How would the hypotheses of Roe, Holland, and others about the development of interests apply to the behavior of these patients? For example, one wonders if the approach taken in the Pool-Brown paper would not apply with equally exciting results if the patients were emotionally disabled. Essentially this is the problem to which Drasgow and Carkhuff have addressed themselves, in a somewhat different vein. The extent to which the "discrepancy pattern" of the SVIB and KPR-C is really a measure of "maladjustment" deserves some further examination.

It is always refreshing to find older instruments whose usage has been limited by

tradition, applied with constructive imagination. There is a feeling of hopeful exhilaration when the results of such applications appear consistent with both the facts and theory of behavior. One can only hope that the authors of these papers have gained enough reinforcement to pursue their suggested research areas further.

We may well be on the threshold of some findings that will enlarge the dimensions of the continuum on which both the "normal" and "abnormal" are presently described. Both of these papers deserve, and hopefully will receive, thoughtful study.

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Anxiety and Academic Prediction

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210 male, college freshmen were divided into 5 groups based on Taylor Manifest Anxiety test scores to determine differences in the effectiveness of aptitude test scores in predicting grades for the 3 subgroups designated as High, Middle and Low anxiety groups, each constituting 20 per cent of the total distribution. For the LA group all correlations were significant at .01 level, for the MA group 2 of 3 correlations were significant, for the HA no significant correlations were found. The differences between coefficients of the HA and LA groups yielded critical ratios which in 2 of 3 cases were significant at .01 level. The MA group had only one correlation significantly higher when compared to the HA group.

Since the appearance of the Taylor Manifest Anxiety Scale (1953) numerous studies have been conducted to determine the relationship of anxiety to conditioning and complex learning. Such studies, conducted under controlled laboratory conditions, showed that the performance of subjects with high anxiety was superior to that of low anxiety Ss in simple conditioning (Taylor, 1951; Spence & Farber, 1953), but in performing complex tasks, Taylor and Spence (1952) as well as Montague (1953) found Ss with low anxiety scores to be consistently superior.

When psychological stress was introduced in the form of failure reports or ego-involving instructions, Lucas (1952) found a decrement in the performance of high anxiety Ss, and Gordon and Berlyne (1954) also noted a significant amount of negative transfer. Furthermore, high anxiety Ss showed greater variability when compared with Ss at the other end of the scale (Mandler & Sarason, 1952). On the other hand, under similar forms of stress, subjects with low anxiety showed significant improvement in their performance (Sarason, 1956; Nicholson, 1958).

In "real-life" studies in which MAS scores were related directly to test performance and academic achievement investigators generally obtained negative results. When MAS scores were correlated with performance on the ACE Psychological Test (Mayzner, et al., 1955; Klugh & Bendig, 1953), scholastic aptitude tests, and grade point averages (Davids & Eriksen, 1955) the results in each instance fell short of significance. In a somewhat different approach, Sarason and Mandler (1952) assumed that due to task irrelevant responses high anxiety Ss would be inferior on college entrance examinations, but with regard to grade point average—due to the facilitating effects of practice and familiarity—they would surpass Ss with low anxiety. The inferiority of the test performance of high anxiety Ss was significant, but the hypothesis regarding grades was not confirmed.

In the studies cited MAS scores were directly correlated with various types of performance, usually aptitude test scores or academic grades. In the present study, however, MAS scores were used to group Ss so that the value of aptitude tests in predicting the academic performance of Ss with varying levels of anxiety could be differentiated. The basic assumption was that under psychological stress there would be greater variability in the performance of Ss

¹Based on a dissertation submitted to New York University in partial fulfillment for the Ph.D. degree, and completed under the supervision of William D. Wilkins.

Table 1
Correlations Between Grades and SCAT Scores
(V=Verbal, Q= Quantitative, T=Total)

Group	N	V score and Grades	Q score and Grades	T score and Grades
Total Population	210	.377**	.266**	.334**
High anxiety	42	.252	-.034	.158
Middle anxiety	42	.279	.407**	.447**
Low anxiety	42	.557**	.507**	.644**

*Significant at .05 level.

**Significant at .01 level.

with high anxiety and that their test scores would not predict academic achievement as well as would the scores of Ss with low anxiety. MAS scores, therefore, were used mainly to identify subgroups for whom aptitude tests might be expected to have greater predictive value.

Method

Subjects

The subjects consisted of 210 male students enrolled as freshmen in a liberal arts, nonresident, college. They represented all the members of the class for whom complete records were available at the end of the first semester.

Procedure

The 210 Ss were arranged in descending order, according to MAS scores, and the upper, middle and lower 20 per cent were designated as High Anxiety (HA), Middle Anxiety (MA), and Low Anxiety (LA) groups. Each of these groups consisted of exactly 42 Ss. The range of MAS scores for each group was—HA, 14-29; MA, 7-9; LA, 0-4.

Form 1C of the School and College Ability Test (SCAT) was administered under psychological stress in the form of ego-involving instructions in which the Ss were told that the test was a measure of their ability to do college work. They were also told that the results would be made available to members of the faculty and administration. The test yielded Verbal (V), Quantitative (Q), and Total (T) scores

which were correlated with weighted grade averages of Ss in each subgroup.

Results

The product-moment correlations obtained between test scores and grades are presented in Table 1. It will be noted that in no case did the correlations for the HA group attain significance, while for the LA group every correlation was significant at the .01 level. The results obtained for the MA group were uneven but they more closely approximated those of the LA group.

In order to determine the reliability of the differences between coefficients, Pearson r 's were converted to Z coefficients and the critical ratios obtained when the various subgroups were compared are presented in Table 2. The HA and LA groups differed most in terms of the correlations obtained with both T and Q scores: the difference between correlations for T scores and grades yielded a CR of 2.68 and a p of .01; with Q scores the CR was 2.62 which also had a p of .01.

Correlations obtained with all three SCAT scores for the MA group were higher than those of the HA group, but only the difference in r 's obtained with Q scores, which yielded a CR of 2.06 and a p of .04, was significant.

The means for the subgroups showed little variation. In not a single one of the comparisons of differences between means did any one subgroup differ significantly from the other two, whether scores or grades were the variables compared.

Table 2
Comparison of Correlations Between SCAT Scores and Grades

Verbal score—Grades				Variables Correlated				Total score—Grades			
Groups*	Z ₁ -Z ₂	CR	P	Groups*	Z ₁ -Z ₂	CR	P	Groups*	Z ₁ -Z ₂	CR	P
HA-LA	.373	1.65	.09	HA-LA	.593	2.62	.01	HA-LA	.606	2.68	.01
HA-MA	.031	.14	.9	HA-MA	.466	2.06	.04	HA-MA	.322	1.42	.16
LA-MA	.342	1.51	.13	LA-MA	.127	.56	.6	LA-MA	.284	1.26	.21

*Group with higher coefficient underlined.
Z₁-Z₂=difference between r's converted to Z's.
CR=Z₁-Z₂ divided by its standard error.
P=probability of chance occurrence of Z₁-Z₂.

A comparison of standard deviations, however, revealed some contrasts. The dispersion measures of the subgroups varied least with regard to grades and Q scores, and comparisons among the groups showed no significant differences. With respect to V scores the variability of the HA group was significantly greater than that of the LA group at the .02 level, and the MA group at the .05 level. The greater variability may partially account for the fact that the V score was the best predictor for the HA group. It did not seem advisable, however, to make corrections for the restriction of range since the results of comparisons made with other groups would not have been affected substantially.

Discussion

Noteworthy is the finding that while the V score was the best predictor for Ss with high anxiety, the Total score, a composite of both V and Q scores, was the best predictor for the MA and LA groups. A possible clue to the higher predictability of V scores for HA subjects may be found in the studies of Davids and Eriksen (1955) and Benton et al. (1955), in which anxiety was positively associated with higher verbal productivity in a word association test and responses to TAT cards. In addition, the observation made by Wechsler (1944) that in mental disorders impairment of functioning is greater in the performance than in the verbal sphere may indicate that under stress HA Ss may be similarly affected. This contention seems to be sup-

ported by the study of Korchin and Levine (1957) who found subjects with high anxiety to have more difficulty in learning false equations ($3 \times 5 = 6$) than did subjects with low anxiety, whereas the difference between these two groups in learning word associates was not significant. Frederiksen, in a study made with Melville in 1954 and replicated with Gilbert in 1960, devised measures of compulsiveness to form subgroups for whom test scores would have different predictive values. Although these investigators referred to their measures of compulsiveness as "rough indicators," they found that noncompulsive students were more predictable than compulsive students based on correlations between average grades, and Strong Blank scores.

The present study also seems to indicate that the concept of "differential predictability" holds promise for the future in view of the fact that the correlation between SCAT Total scores and grades for the total population was .33 in contrast to .64 for the LA subgroup alone. In terms of forecasting efficiency the former coefficient is only 5.6 per cent better than chance while the latter is 23.2 per cent better than chance. The problem is one of uncovering and discriminating personality factors and refining ways of measuring them so that subgroups can be identified with greater accuracy. In this respect the MAS is also a "rough indicator" for although subjects in the upper and lower 20 per cent of a distribution have usually been placed in the extreme anxiety groups, the actual range

of scores obtained for the subgroups has varied from study to study, and in some cases they have even overlapped.

Summary

A group of 210 college freshmen were divided into three subgroups on the basis of scores on the Taylor Manifest Anxiety Scale and for each subgroup the relationship between SCAT scores and first-semester grades was computed. The correlations obtained with Verbal, Quantitative and Total scores for each subgroup were compared with those of the other two subgroups. Tests of significance indicated that the difference between HA and LA groups in terms of correlations between T scores and grades was very significant; the correlation of the MA subgroup did not differ significantly from that of either extreme anxiety subgroup. In terms of Q scores and grades the coefficients of both the LA and MA groups were significantly higher than that of the HIA group. Correlations between V scores and grades did not show any significant difference among subgroups. The results were discussed in terms of identifying subgroups for which aptitude tests may have significantly greater predictability.

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Personality Traits and Discrepant Achievement: A Review^{1,2}

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This review is concerned with the relationship of the following personality traits to discrepant achievement: (a) academic anxiety, (b) self values, (c) authority relations, (d) interpersonal relations, (e) independence-dependence conflict, (f) activity patterns, and (g) goal orientation. The review covers the period from 1933 to 1963 although most of the investigations appeared after 1950.

In general, the following factors have been found positively related to level of achievement: (a) the degree to which a student is able to handle his anxiety, (b) the value a student places upon his own worth, (c) the ability to conform to authority demands, (d) student acceptance by peers, (e) less conflict over independence-dependence, (f) activities centered around academic interests, and (g) the realism of his goals.

A review of the literature relating personality to discrepant achievement indicates with few exceptions the lack of a theoretical orientation which would adequately account for those variables influencing achievement. A logical order then would be to: (1) suggest several personality traits, (2) support these traits by reviewing the research which appears to pertain to each trait, and finally (3) attempt a synthesis in order to emphasize areas potentially significant for future research.

Personality Traits

A review of the literature revealed certain recurrent references to seven basic

personality traits connected with over and underachievement. A basic difficulty in reviewing this research literature occurred in trying to determine the interpretive direction which each researcher implied in his individual study. The hypothesized "summary" traits are presented in Table 1.

The traits listed in Table 1 can be conceived as continua with the over- (or high) achiever characteristics hypothesized as falling at one end of the scale and those of the under- (or low) achiever occupying the other. The assumption is made that such groups represent motivational extremes. Farquhar (1963) has noted the significant lack of comparability in selection techniques used for isolating discrepant criterion groups. This fact suggests caution in accepting many of the comparisons found in the following review.

Academic Anxiety

Directed Anxiety

Horral (1957) indicated that the over-achiever has less deep underlying anxiety, but more inner tension with better outer control than the underachiever. Similar re-

¹An extended version of the present review, together with some preliminary research data were presented by the author at the 1961 meetings of A.P.G.A. in Denver, as part of a Symposium on Academic Motivation.

²The review of literature reported herein was completed as part of a larger project, "A Comprehensive Study of the Motivational Factors Underlying the Achievement of Eleventh Grade Students," under the direction of Dr. William Farquhar of Michigan State University pursuant to a contract with the U.S. Office of Education (Cooperative Project No. 846).

Table 1
Summary of Hypothesized Personality Traits

Direction Low Achiever	Trait	Direction High Achiever
Free-Floating Anxiety	Academic Anxiety	Directed Anxiety
Negative Self-Value	Self-Value	Positive Self-Value
Hostility towards Authority	Authority Relations	Acceptance of Authority
Negative Interpersonal Relations	Interpersonal Relations	Positive Interpersonal Relations
High Independence-Dependence Conflict	Independence-Dependence Conflict	Low Independence-Dependence Conflict
Socially Oriented	Activity Patterns	Academically Oriented
Unrealistic Goal Orientation	Goal Orientation	Realistic Goal Orientation

sults are reported by Holland (1959) and Gough (1953) who concluded that the overachiever, or high achiever, has more self control. His anxiety does not manifest itself in a readily apparent form such as: misconduct, conflict over sex, maladjustment, and neurotic tendencies. Gowan (1957) found that tensions in task-demands during childhood prevailed among overachievers. The result was the development of strong self control.

Free-Floating Anxiety

Two investigators conclude that the underachievers tend to have a high degree of anxiety which demoralizes personal and academic activity (Bond, 1960; Mitchell, 1959). Horrall (1957) reveals that the underachiever has a high conflict over conduct and sex, a high degree of emotionality, and exhibits instability and maladjustment. Roth and Myersburg (1963) indicate a general self-depreciation and free-floating anxiety relating to non-achievement.

Other investigators (Middleton and Guthrie, 1959; Kimball, 1953) have obtained similar results regarding the underachiever's denial of normal shortcomings and his attempt to maintain a superior self-image. An earlier investigation by Gerberich (1941) suggests that the underachiever has difficulty paying attention in class and studying. In a study of elementary school males, Walsh (1956) concludes that the underachiever feels restrict-

ed, hemmed in, and helpless. The underachiever expresses exaggerated free-floating emotion or represses all emotion when some emotional response seems appropriate.

Self Value

Positive Self Value

Several investigations indicate that the overachiever is optimistic, self-confident, adequate as a person, and holds a relatively high opinion of himself (Gough, 1953; Gowan, 1957; Horrall, 1957; Kurtz and Swenson, 1951; Lum, 1960; and Morgan, 1952). A number of other investigations conclude that the overachiever has positive character integration and a personal and intellectual efficiency which is persistent and enduring (Gough, 1953; Gowan, 1957; Krug, 1959; Merrill and Murphy, 1959; and Pierce, 1959). An investigation by Morgan (1952) finds the overachieving male to have insight and realistic attitudes which make for satisfactory self value. A somewhat similar study of elementary males by Walsh (1956) indicates that the overachiever's acceptance of self results in freedom and adequacy of emotional expression.

Two investigations present some findings that disagree with the investigations cited above (Holland, 1959; Mitchell, 1959). The investigators found that the overachiever has feelings of unworthiness about himself and worries more about the impression which he makes upon others.

Negative Self Value

A number of investigators have discovered that the underachiever is self-derogatory and depressed in attitudes toward self (Horrall, 1957; Kimball, 1953; Kirk, 1952; Roth and Meyersburg, 1963; and Shaw, 1960). The underachiever has feelings of inadequacy, a concern about health, and a poor overall adjustment. In these studies it is also concluded that the underachiever has strong inferiority feelings and passivity which result in deliberate failure. Borislow (1962) suggests that the underachiever has a poor conception of his scholastic performance. In other investigations it is indicated that the underachievers lack confidence in themselves and tend to withdraw, attempting to be self-sufficient (Gowan, 1957; Kurtz and Swenson, 1951).

The literature discloses only one investigator (Holland, 1959) who disagrees with this theory of negative self values. He indicates that the underachieving student has positive self attitudes.

Authority Relations

Acceptance of Authority

Several investigations indicated that the overachiever has a good relationship with parents (Gowan, 1957; Gough, 1953; Horrall, 1957; Kurtz and Swenson, 1951). The parents are interested and supportive in regard to their children's academic success and the children in turn respect their parents and attempt to please them by doing well academically. The child conforms to the demands and conventions which are important to the parents. Additional investigations have obtained similar results regarding the overachieving student's relationship with authority outside the home (Erb, 1961; Gerberich, 1941; Holland, 1959; Merrill and Murphy, 1959). The overachiever seems to like most of his instructors and feels that he receives fair treatment. The overachiever attempts to create favorable impressions and is eager to please authority figures. This he does by getting his work in on time, turning in extra as-

signments, exhibiting great interest in the course, and creating no discipline problems in the classroom.

Several other investigators indicate that there may be a negative relation between overachievers and their parents (Drews and Teahan, 1957; Haggard, 1957; Hoffman, Rosen and Lippit, 1960; Horrall, 1957); the theoretical assumption being that a child unable to obtain love, warmth, and understanding at home will compensate for these needs by seeking, in their place, a teacher's approval of his academic achievements.

Hostility Toward Authority

The underachiever's hostility and aggression toward authority has been recognized by many investigators to be directly influenced by his relationship with his parents (Hopkins, Molleson and Sarnoff, 1958; Horrall, 1957; Kimball, 1953; Kurtz and Swenson, 1951; Shaw and Brown, 1957). The parents do not express their love for the child and are somewhat indifferent or disinterested in the child's academic success. In general, there seems to be a great deal of conflict between one or both of the parents and the child. The underachiever feels that his parents have not given him the material things in life that he would like to have. In an investigation involving males only, Kimball (1953) concludes that the underachiever does not have much chance of directly expressing his aggressive and hostile feelings as he grows older—in most cases the father is felt to be very distant, strict, and dominating. Hopkins, Molleson and Sarnoff (1958) conclude that the underachiever chooses his school subjects because of parental pressures rather than genuine interest.

This conflict and hostility seem to be carried over to authority figures outside the home. This is indicated by several studies (Dowd, 1952; Kirk, 1952; Lum, 1960; Shaw and Brown, 1957; Shaw and Grubb, 1958; and Walsh, 1956). They conclude that the underachieving student dislikes his instructors and is resistant to such externally imposed tasks as homework.

The underachiever's dislike and hostility is a pronounced characteristic which tends to create a less favorable impression, and as a result he is less acceptable to the instructor.

An investigation of elementary school males by Walsh (1956) indicates that the underachiever acts defensively either through compliance, evasion, escape, blind rebellion, or negativism.

Interpersonal Relationships

Positive Interpersonal Relationships

Investigations have indicated that the overachieving student seems to be aware of and concerned with others (Gebhart and Hoyt, 1958; Gough, 1953; Gowan, 1957; Holland, 1959; Kurtz and Swenson, 1951; Morgan, 1952; Pierce, 1952). The overachiever is interested and responsive to the feelings of others and accepts them. He denies feelings of ill will and animosity toward anyone and is free of interpersonal friction. Peer relationships are strong and supportive. Middleton and Guthrie (1959) conclude that the overachiever's achievement is motivated by social acceptance. An investigation of elementary school males by Walsh (1956) found that the overachiever has a present feeling of belonging.

A number of other investigators seem to be in conflict with the theory of positive interpersonal relationships (Holland, 1959; Horrall, 1957; Krug, 1959; Merrill and Murphy, 1959). These researchers found in their respective studies that the overachieving student tends to be unso-cialable in his attitude toward peers. Rabinowitz (1956) indicates that one of the reasons for the overachieving student's excellence in the academic area is his doubt and confusion in the areas of family and peer acceptance. It would appear, though, that it is not so much a factor of not getting along with peers as it is a result of spending more time in individual tasks and therefore socializing less.

Negative Interpersonal Relationships

Three investigations conclude that the underachiever has conflict over his conduct

and heterosexual adjustment (Horrall, 1957; Kurtz and Swenson, 1951; Snellgrove, 1960). Similar investigations support this statement and indicate that the underachievers are overly critical of others and exhibit asocial behavior (Gough, 1953; Gowan, 1957; and Shaw and Brown, 1957). The underachiever also tends to be withdrawn, self-sufficient, distinterested in others, and apathetic in many of his relationships with peers and adults. An investigation by Armstrong (1955) reports that underachieving girls are not chosen for positions of responsibility in extra-curricular activities; while the male underachievers prefer companions who are older than themselves. The underachiever obtains lower ratings on co-operation, dependability, and judgment. Walsh (1956) indicates that the underachiever tends to feel rejected and isolated from others. Holland (1959) seems both to agree and disagree with the theory of inadequate interpersonal relationships. He observes that the underachiever creates a less favorable impression upon peers and authority figures and yet seems to be poised, socially skillful, and flexible in his attitudes.

Independence-Dependence Conflict

Low Independence-Dependence Conflict

Several investigations have indicated that the overachiever's interest and emotional maturity is high. He tends to be dominant in his group (Cohler, 1940; Horrall, 1957; Merrill and Murphy, 1959; Morgan, 1952). A number of investigations have concluded that the overachiever is dependable and responsible, having a basic seriousness of interests which enables him to perform in leadership capacities (Holland, 1959; Holland, 1961; Kurtz and Swenson, 1951; Morgan, 1952). An investigation of elementary school males by Walsh (1956) found that the overachiever feels free to make choices and initiate activities.

Other investigators (Holland, 1959; Middleton and Guthrie, 1959) disagree, to some extent, with the theory that the overachiever is more independent. They indicate that the overachiever's success is mo-

tivated by dependency and that he is more oriented toward achievement than toward independence. It is also indicated that the overachiever does well academically under direction, but is not as adept in situations demanding independent judgment.

High Independence-Dependence Conflict

A number of investigations have indicated that future goals, occupations and subjects are influenced by parental pressures and aspirations (Armstrong, 1955; Brown, Abeles, Iscoe, 1954; Hopkins, Molleson, and Sarnoff, 1958; Mitchell, 1959). The underachiever lacks a decisiveness to act and future occupations are chosen because of the influence of others. One study of males only by Kimball (1953) found that the underachiever has prominent dependency needs.

Contrary findings are reported by Stagner (1933) who concluded that the underachiever has a high degree of self-sufficiency.

Activity Patterns

Academically Oriented

Several investigators have indicated that the overachiever derives self satisfaction through work and has a high motivation to achieve (Gebhart and Hoyt, 1958; Krug, 1959; Lum, 1960; Mitchell, 1959; Morgan, 1952). Additional studies indicate that the overachieving student spends most of his time on studies, gets assignments in promptly, has good study habits, and generally has a feeling of academic effectiveness (Dowd, 1952; Gerberich, 1941; Gough, 1953; Horrall, 1957). Two investigators (Holland, 1959; Pierce, 1959) conclude that the overachiever is able to work effectively under direction but is not as adept in situations demanding independent judgment. It is indicated that the overachiever is achievement rather than individuality oriented. Kurtz and Swenson (1951) conclude that the overachiever is academically inclined, happy in a classroom situation, derives satisfaction from book-learning, has high educational and vocational goals, relates school work to future goals, and tends to regard education for more than its job value.

Socially Oriented

Various investigations indicate that the underachiever lacks motivation and interest in the academic area, but obtains self satisfaction in other areas (Brown, Abeles, and Iscoe, 1954; Holland, 1959; Mitchell, 1959; Terman and Oden, 1947). One example is that he is considered more socially skillful than the overachiever. The underachiever is unwilling to conform to academic requirements and has strong "activity" interests as opposed to intellectual interests. Several other investigators emphasize the underachiever's tendency toward pleasure seeking and extroversion and the tendency to go to college for social reasons, e.g., joining a fraternity or sorority (Gerberich, 1941; Hopkins, Molleson and Sarnoff, 1958; Horrall, 1957; Middleton and Guthrie, 1959). The underachiever is found to have strong affiliation needs and he immaturity reaches out for contact experiences. Gowan (1957) indicates that the underachiever has unclear and indefinite academic and occupational choices.

Goal Orientation

Realistic Goal Orientation

Several investigations of overachieving males indicate that they have a drive to organize and plan their lives. They are dependable, consistent, and responsible in relationship to task demands and requests from others (Diener, 1960; Gebhart and Hoyt, 1958; Holland, 1959; Krug, 1959; Morgan, 1952). The overachiever also has a basic seriousness of purpose, is intellectually efficient, energetic, conscientious, and has an insight and realistic attitude toward himself and others. A number of other studies conclude that the overachiever is conservative in setting goals; has persistent and effective study habits; has a capacity for sustained and diligent application; rejects the frivolous and diversionary; is orderly and planful; and has a basic seriousness of purpose (Dowd, 1952; Gerberich, 1941; Gough, 1953; Gowan, 1951; Holland, 1961; Kurtz and Swenson, 1951; Merrill and Murphy, 1959). These investigations indicate that the overachiever tends

to relate school work to future goals and is intellectually efficient.

Unrealistic Goal Orientation

A number of investigators indicate that the underachiever is highly emotional, lacks decisiveness to act, is restless, changeable, and unhappy (Brown, Abeles and Iscoe, 1954; Dowd, 1952; Kurtz and Swenson, 1951; Holland, 1959; Lum, 1960; Mitchell, 1959; Stagner, 1933). It is also concluded that the underachiever lacks motivation to complete tasks that are assigned either in school or at home. Several of the investigations emphasize the underachiever's inability to decide upon educational and vocational goals, and the difference between measured interests and stated future vocational goals. It is indicated that many underachievers have no stated goals or else have stated goals impossible to achieve (Armstrong, 1955; Dowd, 1952; Gowan, 1957; Hopkins, Molleson, and Sarnoff, 1958; Kurtz and Swenson, 1957; Lum, 1960; Mitchell, 1959).

Conclusions

The weight of evidence in the literature would seem to support the following conclusions concerning the relationship of certain personality traits to academic achievement.

1. The degree to which a student is able to handle his anxiety is directly related to his level of achievement.
2. The value the student places upon his own worth affects his academic achievement.
3. The ability to conform to and/or accept authority demands will determine the amount of academic success.
4. Students who are accepted and have positive relationships with peers are better able to accept themselves. Students who do not have peer acceptance generally go outside the school environment for their satisfactions.
5. The less conflict over independence-dependence relationships a student copes with, the more effort he places on achievement.

6. Activities which are centered around academic interests are more likely to produce successful achievement.
7. The more realistic the goal the more chance there is of successful completion of that goal.

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Effects of Socio-Economic Level on MMPI Differences in Negro-White College Students¹

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Recent investigations of Negro and white differences on the MMPI have failed to take into consideration variables of age, sex, education, institutional differences, and socio-economic level. This investigation was directed toward studying Negro and white differences by controlling these variables in college students. Two major comparisons were undertaken: (a) between groups of 50 each of white and Negro males and females *not* matched for socio-economic level (SEL), and (b) between groups of 26 white and 26 Negro males and 16 white and 16 Negro females matched for SEL. Both socio-economic level and other sub-cultural factors were found to influence MMPI characteristics.

Investigations comparing MMPI profile differences between Negro and white subjects have obtained inconsistent results, arising probably from the sampling procedures involved. Fry (1949) found no significant differences between Negro and white prisoners in Pennsylvania while Caldwell (1954), using Alabama prisoners, found Negroes higher on scales Sc, Ma, Pa and Pd. Pantan (1959) found Negro prisoners higher than white prisoners on Sc, Ma, Pa, and F scales. There was also a tendency (not significant) for white prisoners to score higher on Hs and Pd.

Hokanson and Calden (1960), using male tubercular patients of predominantly northern working class, found Negroes significantly higher on Pd, Mf, Sc, Ma, L, and F. An unpublished study conducted by Gottlieb and Eisdorfer (1959) on the personality patterns of medical patients, using both Negro and white subjects, concluded that psychopathology exists in pa-

tients seeking medical care, and that deviant profiles occurred in both Negro and white patients. The white group was significantly higher on Hs, D and Hy (the neurotic triad) while the Negroes were higher on Sc and Pd. Ball (1960), employing the only non-institutionalized sample yet reported (lower class Negro and higher status white, school children), found Negro boys higher on Hs and Negro girls higher on Sc, Si and F. White girls were found to be higher on K and Hy. Miller, Wertz, and Counts (1961) found that Negroes scored higher on L while whites were higher on Mf. These investigators concluded that social factors such as occupational level, educational attainment, or institutional membership determine most of the variance in test scores, and that very little variance is associated with membership in a racial group. Dahlstrom and Welsh (1961) have also pointed out that the results of most of these studies are what one would expect from differences in socio-economic level.

The wide use of the MMPI for research and counseling in college populations points up the necessity of studying Negro-white differences to determine if special research controls and new inter-

¹We are indebted to Professor W. Grant Dahlstrom of the University of North Carolina for helpful suggestions during the initial stages of research, and for advice and assistance in the interpretation and presentation of the results. We alone are responsible for errors which may remain.

pretive norms are indicated for use in this setting. The present study was undertaken to determine if there were differences between Negro and white MMPI profiles, when some of the possible contaminating factors of age, sex, education, regional background, and socio-economic level were controlled.

Method and Procedure

Subjects

All Ss were college students who were enrolled in introductory psychology courses in their respective schools. The age range was 19 to 22 years. Ss not born and educated in North Carolina were removed to eliminate possible contaminating effects of regional differences. The experimental groups were drawn from two state institutions. White Ss were obtained from the University of North Carolina (UNC) and Negro Ss from North Carolina College (NCC). After the elimination of out-of-state Ss and invalid profiles, the samples were reduced to 555 males and 101 females from UNC and 74 males and 130 females from NCC. Although the sample sizes are unequal it was necessary to have a larger number of white subjects to obtain adequate matching for socio-economic level.

A control sample of white Ss from a small liberal arts college in North Carolina, Guilford College (GC), was obtained to determine if there were MMPI differences among white Ss attending different institutions. Using each of the same criteria in the selection of Ss, samples of 84 males and 33 females were obtained.

Procedure

A Negro examiner at the Negro college and white examiners at the white colleges were used. The MMPI was group administered and hand scored. Records with L and K scales above a critical score of $T=70$ and F scale above $T=80$ were disqualified. In addition to the MMPI, Ss were given a biographical questionnaire and asked to furnish, in confidence, information regarding their age, place of birth, high school location, and the occupation and annual family income of their parents.

Warner's (1949) Occupational Index (OI) was modified to include both occupations more prevalent in Southern states and annual family income. Using this socio-economic level (SEL) scale ranging from 1 (high SEL) to 7 (low SEL) each S was assigned an SEL score. Admittedly, the OI is only a gross measure of socio-economic level in matching Negro and white Ss since the same occupation often carries higher status and/or higher income, in one group than in the other. However, this method seemed to be the most adequate approach available.

Comparisons

Three major comparisons were undertaken: (A) To determine if there were MMPI differences between white males and females attending different colleges, a control comparison was designed using Ss matched for age, sex, education, and socio-economic level. Forty-nine UNC males and 49 GC males (SEL 2 and 3) and 16 UNC females and 16 GC females were compared. (B) To determine subcultural differences other than socio-economic, a comparison was made between a representative sample of 50 males and 50 females from both UNC and NCC. These Ss were matched for age, sex, education, and region as were the other groups, but not matched for SEL. This sample was representative of each SEL in the subject population but was random within each SEL. (C) To determine possible differences between Negro and white Ss who were matched for age, sex, education, and socio-economic level, comparisons between 26 NCC and 26 UNC males (SEL 5) and 16 NCC and 16 UNC females were made.

Results

A multi-variate analysis would have been appropriate for this study, but because of the unequal sample sizes and the authors' desire to make this study comparable to previous studies of this nature separate *t* tests on MMPI scales were performed. Interpretation of these results should therefore be guarded because of the intercorrelation of some MMPI scales.

Tests of significance were performed both on scales appearing different upon visual inspection of the group mean profiles and on those scales on which differences between Negro and white Ss have previously been reported. All significance tests were performed on non-K corrected raw scores, two-tailed tables were used and the .05 level of significance was established.

In the control Comparison A, only the K scale was significantly different ($p < .05$) for white males while no significant differences appeared in the white female comparison.

The results of Comparison B, between representative (non-matched) samples of Negro and white male subjects, are presented in Table 1. Negro males were higher on scales L and Ma while white subjects were higher on Pa and Es scales. The results of Comparison B between representative samples of white and Negro females are shown in Table 2. Negro females were

Table 1

Comparisons of MMPI Scores of Representative Samples of Negro Males (N = 50) and White Males (N = 50)

Scale	Negro (NCC)		White (UNC)		Mean Difference t Values
	Mean	SD	Mean	SD	
L					2.45*
F	3.86	2.23	2.82	2.20	
K	4.44	3.04	3.98	3.01	
Hs	14.32	4.60	14.70	4.46	
D	4.98	3.04	4.60	3.01	
Hy	19.12	4.00	18.36	4.40	1.61 NS
Pd	19.22	3.90	20.54	4.25	
Mf	16.90	3.92	16.86	4.79	1.48 NS
Pa	23.34	4.71	24.82	4.99	2.95**
Pt	7.38	2.56	9.06	3.09	
Sc	12.56	7.10	11.70	6.79	
Ma	13.16	7.51	11.18	7.89	2.03*
Si	19.48	5.66	17.68	3.67	
A	22.47	7.36	23.00	7.67	1.81 NS
R	13.38	8.34	10.44	7.69	
Es	14.58	4.07	15.36	3.28	2.88**
	45.62	6.46	49.14	5.71	

* $p < .05$
** $p < .01$

significantly higher on the L scale and white females were higher on Mf, Pa and R scales.

Table 2

Comparisons of MMPI Scores of Representative Sample of Negro Females (N = 50) and White Females (N = 50)

Scale	Negro (NCC)		White (UNC)		Mean Difference t Values
	Mean	SD	Mean	SD	
L	4.38	2.53	2.42	1.55	4.42**
F	4.36	2.88	4.04	2.67	
K	14.10	3.60	14.64	3.31	
Hs	6.44	2.01	5.80	3.75	
D	20.60	4.86	18.92	4.76	
Hy	21.52	5.10	21.04	5.61	
Pd	15.66	3.49	14.88	3.78	
Mf	34.30	4.09	36.96	5.06	2.89**
Pa	7.54	2.95	9.86	3.18	3.78**
Pt	12.42	6.11	12.96	6.19	
Sc	11.44	5.93	10.86	6.61	
Ma	18.38	4.29	17.04	4.13	
Si	25.10	6.83	25.76	7.44	
A	13.32	7.01	12.52	6.21	
R	16.46	2.80	17.86	3.50	2.26*
Es	42.76	5.74	44.92	5.52	1.92 NS

* $p < .05$
** $p < .01$

The results of Comparison C, in which Negro and white subjects were matched for age, sex, education, and socio-economic level, are presented in Tables 3 and 4. One result of matching Ss for SEL is that it introduced unequal variances on some scales, particularly Si and Es in the male groups and Pt and Sc in the female groups. It should be noted that these unequal variances did not necessarily produce statistically significant t values. As shown in Table 3 Negro males had significantly higher elevations on K, Ma, and Es, while white male Ss were higher on the Pa, Mf, Pt, Si, and A scales. The Negro and white female comparison is shown in Table 4. Negro females had significantly higher elevation on the L scale and white females were significantly higher on Pa and Mf (i.e. in the "feminine" direction).

Table 3

Comparison of MMPI Scores of Negro Males (N = 26) With White Males (N = 26) Matched For Socio-Economic Level (5)

Scale	Negro (NCC)		White (UNC)		Mean Difference <i>t</i> Values
	Mean	SD	Mean	SD	
L	4.15	2.57	2.38	2.23	2.68**
F	4.57	3.47	4.27	2.61	
K	15.57	4.41	12.50	4.01	2.65**
Hs	4.34	2.54	5.15	3.13	
D	18.69	4.04	19.88	4.56	
Hy	19.50	3.90	19.23	4.09	
Pd	16.26	3.89	17.50	5.38	.93 NS
Mf	23.11	5.22	27.53	5.93	2.85**
Pa	7.57	2.85	9.46	3.25	2.22*
Pt	10.88	7.44	16.19	8.24	2.04*
Sc	11.84	7.25	13.88	7.42	.99 NS
Ma	19.92	3.90	15.73	5.07	2.55*
Si	20.38	5.24	26.35	9.58	2.78**
A	10.11	7.09	16.23	9.16	2.70**
R	15.23	3.67	16.15	4.14	
Es	48.53	4.91	43.76	8.15	2.56*

* $p < .05$

** $p < .01$

Table 4

Comparison of MMPI Scores of Negro Females (N = 16) With White Females (N = 16) Matched For Socio-Economic Level (3 and 4)

Scale	Negro (NCC)		White (UNC)		Mean Difference <i>t</i> Values
	Mean	SD	Mean	SD	
L	4.87	2.55	2.81	1.76	2.64**
F	3.62	1.99	4.18	3.18	
K	15.81	3.85	14.25	4.34	
Hs	6.62	3.24	6.63	5.19	
D	22.31	4.45	20.31	5.88	
Hy	22.06	5.18	20.06	4.41	
Pd	16.94	3.36	16.31	4.67	
Mf	34.87	3.06	38.63	5.33	2.14*
Pa	7.94	3.06	11.19	2.68	3.22**
Pt	11.44	4.77	16.00	9.35	1.74 NS
Sc	10.69	5.12	14.75	10.18	1.42 NS
Ma	17.06	2.20	17.62	4.42	
Si	26.62	7.34	28.94	3.11	
A	12.50	6.98	14.69	8.19	.81 NS
R	17.94	2.86	16.31	2.67	1.66 NS
Es	43.75	4.61	43.75	7.07	

* $p < .05$

** $p < .01$

Discussion

The control comparison made between two white college samples suggests that North Carolina students attending these institutions are quite similar in MMPI characteristics. The only significant difference on all 16 MMPI scales in both the male and female comparisons was on the K scale in the male contrast, which is probably a chance finding. Since very little of the variance can be attributed to such institutional differences, the data in the following comparisons are probably independent of some of the characteristics associated with university setting such as size, specialization, or difficulty level.

The possible contaminating effects of different socio-economic levels was controlled by making comparisons on groups which had been equated for socio-economic level and on representative samples of Negro and white, male and female Ss that had not been matched for SEL.

The results of Comparisons (B) and (C) indicate that sub-cultural differences exist independent of sex and socio-economic level. That is, the possible contaminating effects of different socio-economic levels was controlled by making comparisons on groups which had been roughly equated for socio-economic level and on representative samples of Negro and white, male and female, Ss that had not been matched for SEL. In both the matched and representative comparisons for males and females the L scale was higher for Negroes and the Pa scale higher for white Ss.

It should be noted that other sub-cultural differences were obtained but were not independent of sex of S. That is, Negro males were higher on the Ma scale and white females were higher on the Mf scale in both the representative and the matched comparisons.

The differences between Negro and white Ss in the matched comparison may be looked upon as artifacts. If a different SEL had been used in the matched comparison, different results might have been obtained. Equating SEL for Negro and white Ss presents some problems. Although college Ss can be matched reasonably well on the

basis of their parent's occupation, there is no guarantee that Negro Ss are of the same SEL as white Ss, since both incomes and job conditions differ for Negroes and whites. Another difficulty occurred when Ss had been assigned to SELs. Socio-economic level 5 for Negroes cannot be considered the same as SEL 5 for whites since this is the modal level in the Negro group, and the lowest level in the white group. Thus, in the matched comparison for males, low status white Ss are being compared with Negroes who are in the modal SEL for their group. This may explain the differences found in this comparison. Negro Ss were higher on K and Es, while white Ss were higher on Mf, Pt, Si, and A. Given roughly the same low occupation and income levels, white Ss, in adapting to an overall high socio-economic group appear to be more socially introverted and anxious than Negroes who are closer to their own norm.

In the female groups, only the R scale showed a difference in addition to the pervasive difference on L and Pa. The fact that these male differences do not appear in the female comparisons may be due to the different SEL category used for the females (SEL 3 and 4) necessitated by the small number of white females in SEL 5. If females of SEL 5 could have been matched, the results might have been more comparable to those found in the male comparisons.

The results of this study indicate that counselors using the MMPI with Negro students or students varying in socio-economic level will find profile interpretation more complicated. These data are not, because of evident limitations, proposed as additional norms for this population of subjects. They do suggest, however, that additional norms would be desirable for more accurate profile interpretation.

The differences obtained when Ss were matched for socio-economic level also point up the necessity of controlling this variable in future studies. Further studies of Negro

and white subjects from other populations with appropriate controls will be required to determine accurately the usefulness of the MMPI with Negro subjects. This study suggests also that the MMPI may be useful in other social psychological research since it shows sensitivity to both socio-economic and other sub-cultural influences.

Summary

Recent investigations of Negro and white differences on the MMPI have failed to take into consideration variables of age, sex, education, institutional differences, and socio-economic level. This study was directed toward studying Negro and white differences by controlling these variables in college students. Both socio-economic and other sub-cultural factors were found to influence MMPI characteristics.

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Research Frontier

Current Research on the Career Development of Scientists

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In 1956 a conference was held at Columbia University's Arden House to consider current research on scientific careers. (Super & Bachrach, 1957). The participating psychologists used the conference as a forum to consider the general problem of research in vocational psychology. In this paper I will consider aspects of the general problem of research in careers as related to my recently completed Scientific Careers Study (Cooley, 1963).¹

Most of the participants at the Arden House conference called for a movement away from the classical trait-and-factor approach, which had been used for years as a method of determining the personal traits needed for a particular line of work. As Super (1963) put it, "this model matches youth and jobs and assumes that once the match is made the lucky pair lives happily ever after."

The reaction against the classical model may have gone too far. It is perhaps still valid to consider procedures for anticipating vocational decisions from the types of measurements and observations counselors are able to make. Today, however, the trait-and-factor problem should not simply be the task of relating a test score to some final occupation, but rather a consideration of the *pattern* of attributes that are related to the *sequence* of decisions as students move through our schools and into the world of work.

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Super (1963) has expressed the hope that statistical methods can be developed for the study of career development which are as appropriate as regression and discriminant methods were for the classical trait-and-factor approach. The following discussion presents some arguments for the continued use of discriminant analysis which Tiedeman (1951) first suggested was applicable to problems in vocational psychology. Empirical results from the Scientific Careers Study are referred to in an attempt to illustrate the arguments.

Factor Theory

Most active researchers today consider career development to be a part of personality development.² The primary aspects of career development which are of concern in this paper are the educational and vocational plans and decisions which one makes in going from elementary school through college and out into the first work situation. These decisions are assumed to be in part a function or manifestation of personality.

In this context, personality is defined in terms of the conceptual scheme used to summarize and interpret previous responses of the person and to anticipate future responses. Personality is a theoretical interpretation of the person's behavior which is derived from *all* of his previously observed behavior. This definition of personality follows McClelland (1951), and includes intellectual functioning.

²See, for example: Bordin, Nachman, & Segal (1963), Holland (1963), Roe (1956), Super (1957), and Tiedeman & O'Hara (1963).

Many different types of conceptual schemes have been advanced for dealing with personality chiefly because psychologists deal with many different kinds of problems. Although factor theory may or may not be useful in dealing with mental illness, for example, or for explaining change in personality, it seems to be a particularly operational scheme for describing the current personality of a person. That is, over short periods of time, factor theory serves as a useful and economical model to account for the previously observed sample of behavioral responses and to predict what responses are likely to occur in the near future. The length of time over which predictions are valid would depend upon the relative stability of the individual's personality under investigation and the type of prediction attempted.

In the factorial conceptualization of human behavior, personality has its locus in an m -dimensional space. An individual's personality is his unique location in this space, the location determined by the total pattern of the m behavioral measures which are available for that individual. People who have similar patterns of test scores (or factor or discriminant scores) will occupy similar regions of this m -dimensional space. That is, people who behave similarly have similar personalities. People with similar personalities *tend* to make similar types of career decisions. Once the regions of the test space or discriminant space occupied by people making particular types of career decisions are defined, the probability that a person will make a certain decision can be estimated.

For example, if a decision between two alternatives has been made by individuals located in the behavioral space, such as (A) college preparatory curriculum in high school and (B) non-college preparatory, the behavioral space will contain regions in which many individuals chose A over B, other regions in which choice B was preferred to A. There may be at least some A choosers in all regions of the personality space, but the A density varies from region to region. Comparison of the density of A

choosers to B choosers at a particular point in the space determines the probability that choice A will be made by persons at or near that point. This scheme of analysis is generalizable to decision-making situations involving more than two alternatives.

Although it is assumed here that the differences among individuals which result in different choice behaviors can be best described by locating individuals as points (or vectors) in a multidimensional personality space, it is also recognized that environmental factors play an important part in this process. This effect can be examined by use of an environmental space, the dimensions of which are determined by sampling conditions in the individual's environment. The personality or behavioral space would be defined by factors from the domains of ability, interest, values, temperament, needs, and motives, whereas the environmental space contains factors based upon such information as father's occupation, parents' expectations for child, school opportunities, home climate, religious and ethnic group membership, etc. Methods of multivariate analysis can be used to reduce either space to the minimum number of dimensions needed to describe the differences among individuals, or among groups of individuals making similar types of decisions, so that a large mass of data can be reduced to a more manageable size.³ Roe and Siegleman (1964) have recently shown how multivariate analysis can also be used to establish relationships between these two types of spaces.

Location in a certain region of the environmental space is a function of those conditions in the environment which are likely to affect educational and career decisions. As in the behavioral space, the density of points representing a particular type of choice varies from region to region of the environmental space. Location in

³Cooley & Lohnes (1962) provide descriptions of and computational procedures for these multivariate procedures. Also, see Sells (1963) for a recent argument in favor of this type of multivariate approach.

the environmental space is related to choice behavior for two reasons:

(1) Different regions of the environmental space tend to reinforce certain behaviors more than others. This environmental effect will in part determine the individual's personality.

(2) Different regions of the environmental space also affect choice behavior directly, without necessarily affecting verbal responses to test stimuli. This is because certain environmental variables, such as socio-economic status of parents, affect choice directly by limiting some choices and expediting others.

Developmental Stages

Since learning occurs continuously, it is possible that the relative locations of individuals in the behavioral space will change over time. It is therefore necessary to break the process of career choice into stages. In the study of entrance into scientific careers, gross chronological stages can be used, based upon the decision points which are encountered as one moves through our schools and into work situations. These are similar to Super's (1957) developmental stages, as modified in Cooley (1958).

During the extended period of time in which one "becomes" a scientist, prediction is directed toward the next stage of development rather than to some hypothetical "final" occupation. The assumption is that the relative positions of individuals in the behavioral and environmental space is sufficiently stable to allow the predictions of choice over a four- or five-year span. That is, the changes in personality which do occur over such a period are fairly uniform over all persons, so that their positions, relative to each other, do not change to any significant degree.

In the type of complicated choice process under consideration, at the early stages of development the alternatives are grossly categorized in some fashion and a decision is made from among the gross categories; the alternative chosen is further categorized and a second decision is made; etc. This process of refinement takes place over an extended period of time.

At early stages (grades 5 to 9) it seems unreasonable for the investigator to take

specific occupational preferences at face value because specific goals are unstable during these early years. Thus, for example, natural science as a broad occupational area (both pure and applied) is considered as an undifferentiated field through high school. Only after entrance to college does the student (and hence the researcher) need to consider more specific criterion groups within science.

The Irreversible Nature of Certain Decisions

Although the decision to embark upon a scientific career cannot be considered as a single event occurring at some point in time, certain crucial educational decisions, which are forced at several stages of educational development, limit the career possibilities open to an individual when he terminates his education. Because of the specialized nature of work in science and technology, after a certain stage of development is reached (perhaps somewhere in senior high school), changes in the potential scientist pool (PSP) are essentially a one-way proposition—out. This illustrates the irreversible nature of certain aspects of vocational development, a point first emphasized by Ginzberg *et al.* (1951).

I shall now turn to the Scientific Careers Study to illustrate how this type of thinking can guide research in careers.

Description of the Scientific Careers Study

The general purpose of the Scientific Careers Study was to examine the process of becoming a scientist, from elementary school through four years beyond college, in order to determine the major factors affecting the decisions involved in that process. The goal of this study was not a static description of how scientists as a group differ from other professionals, but rather an explanation of movement into, within, and possibly out of scientific careers.

There were two general types of dependent variables in this investigation. The first type is based upon the various decisions students are forced to make as they move through the schools. The other criterion type is derived from stated career plans

Table 1
Grade Spans and Sizes of Groups

Sample Group	Number of Students	Elem.	Jr. H.S.	Grade Span High Sch.	College	Graduate School
Grade 5	143	5 6	7 8 9			
Grade 8	167		8 9	10 11 12		
Grade 11	192			11 12	13 14 15	
Grade 14	105				14 15 16	17 18
Grade 16	93				16	17 18 19 20
Total	700					

and includes the stability of those career goals. Also, the relationships between educational decisions and career plans are important, since, for example, a student may choose a course of study which would make realization of his plan highly unlikely.

A five-year overlapping longitudinal design was employed in order to investigate within five calendar years sixteen critical years of the developmental process. This was accomplished by selecting 700 male students from five grade levels, three grades apart. Table 1 shows the grades covered by the five groups and the number of students included in each.

The two years of overlap allowed comparisons between adjacent groups. It was not our desire or expectation to predict which fifth graders would become Ph.D.'s in theoretical physics, but rather to identify factors which are related to educational and career decisions made at the various stages of development, and to predict from one stage to another. Thus trends found in one age group could be cross-validated using similar information obtained from the following age group as they moved into the same school situation.

A major advantage of this design when used in studying entrance into a particular occupational area such as science is that the sampling of age groups can become more selective from grade 5 to college seniors. Thus our elementary school boys were simply above average in general intelligence, since the future scientists lie within this group. The college population sampled consisted of science majors for the same reason.

Following the selection of the 700 boys, each student was given an intensive battery

of tests which included measures of ability, interest, values, temperament, motives, and home background questionnaires. Each student was contacted each of the five years of the study to determine career plans and educational decisions. This was done by both interviews and questionnaires. Contact was maintained with over 90 per cent of the original sample.

Illustrative Results

It is difficult to summarize the results of five years of research in so brief a space. However, a small sample of these results may be useful to illustrate the approaches used. Those interested in the details behind this summary can consult the full report (Cooley, 1963).⁴

The major method of analysis used in this investigation was multiple-group discriminant analysis. Students were classified into criterion groups depending upon educational decisions and current career plans. The following four criterion groups were used for the three younger samples (boys with above average intelligence selected at grades 5, 8, and 11), with the exception that group 4 (NCNT) was an "empty" group until senior high school.

(1) *Potential Scientist Pool (PSP)*: Attend a four year college, major in one of the natural sciences or engineering with plans to pursue a career in science, applied science, or engineering.

(2) *College-NonScience (CNS)*: Attend a four year college, majoring in something other than science or engineering, with no plans to pursue a career in a scientific field.

(3) *NonCollege-Technical (NCT)*: Not attend a four year college. Full or part-time school at

⁴The report is being distributed by the Cooperative Research Branch of the U.S. Office of Education to libraries of the Documents Expediting Project.

tendance may be the case, but only at a one or two year technical school. The career is in technology, at least for the near future.

(4) *NonCollege-NonTechnical (NCNT)*: Not attend a four year college. Full or part-time school attendance may be the case, but only at a junior college or two year business or accounting school. The career is not in technology.

To illustrate the findings from this type of investigation, the ability and interest analysis can be briefly summarized.

Abilities: In the early years prior to junior high school, ability does not appear to be related to educational and career plans, given boys with above average ability. Also at this early stage, the PSP does not stand out as the most able group and is no more able than the other boys planning college. In fact, there is little difference in abilities between boys planning college and those not. From junior high school through senior high school, the ability information becomes more and more important. During the transition from high school to college, it becomes a very critical domain, the PSP being the more able group. A surprising finding was that the college non-science students were no more able than their fellow college preparatory students who did not go on to college. A little later, the ability information available on the college science majors showed very little relationship to post-college plans or decisions. So it is only in applying for acceptance to a college which trains scientists or engineers, or during senior high school, when deciding that science requires able students, that the less able drop out.

Interests: The surprising finding with regard to measured interests was that "the wrong" scales seemed to be making the long-range predictions. Although the scientific interest scale on the Kuder Preference Test is obviously related to current plans to be a scientist at the time the Kuder is taken, it is no more related to membership in the PSP five years later than were those earlier stated plans. Asking an 11th grade boy whether or not he wants to become a scientist is just as indicative of what he will be doing as a college junior

with respect to science, as is his score on the Kuder scientific scale. However, if that 11th grade student's score is also high on a scale which might be considered people-oriented or extrovertive, such as the persuasive scale, he may very well change from a science career. Thus it is the *pattern* of Kuder interest scores that has the long range validity.

General Research Implications

This study is probably the first research effort to employ an overlapping longitudinal design, and the modest success achieved here suggests the promise of the technique.⁵ Now that most vocational psychologists view career choice as a developmental process, longitudinal studies seem to be essential. Also, since research generally involves a series of successive approximations, the overlapping design makes it possible to accomplish more in a given time span. This in part reflects a conviction that it is more fruitful to study a particular occupational area over a long developmental span than to consider in detail "all" occupations at a particular developmental stage.

A related implication is the utility of broad educational and career decision categories as dependent variables. Although it may be useful to distinguish among very specific types of occupations when considering adults, it is unreasonable to make greater distinctions at earlier stages of development than students themselves make or need to make. The questions asked here concerned the factors related to the initial attraction to a broad occupational area (i.e., science) and the subsequent factors related to the further distinctions which students make within science.

This investigation has also illustrated the advantages of applying discriminant analysis to logical domains of predictors, rather than pooling all available data at once. The procedure makes it much easier to interpret results and has the added advantage of being able to compare the relative

⁵A similar design was first proposed by Dyer (1956).

discriminating power of different types of information. Also, the number of discriminant functions which a particular domain yields is revealing.

The power of the probability-of-group-membership prediction system was clearly seen in this study. This technique not only results in surprisingly accurate predictions, but directly provides an estimate of error. If the probability that student i will "survive" if he makes decision A is .70, then we know we will be wrong 30 per cent of the time if we "assign" all students like i to group A. The probabilities summarize all the relevant information with respect to both predictors and criteria, whenever statements about individual students are desired.

Further work is needed in test development if the overlapping design is to be more successful. Reliable instruments are needed which are capable of measuring similar personality dimensions over a wide age range. The Rorschach test had been counted on for this purpose, but the results were unsatisfactory. It would seem possible to develop reliable, parallel forms of group tests which could be administered over the age range represented here.

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Comments and Letters

Effectiveness of the Guilford-Zimmerman Temperament Survey As a Predictor of Scholastic Success in College

Despite widespread use of the Guilford Zimmerman Temperament Survey (GZTS) in psychological appraisal, information concerning the effectiveness of this instrument as a predictor of scholastic success in college is scanty. Webb and Goodling (1958) found no significant relationship between various GZTS scores and grade point average (GPA), while Witherspoon and Melberg (1959), in a study of first semester freshmen found low relationships between GPA and R and P traits. However, the former study was restricted to theology students while the latter study did not partial out scholastic aptitude. The present study utilized a large entering freshman class of a presumably representative municipal university and was designed to ascertain whether the GZTS could enhance the prediction of GPA after scholastic aptitude was taken into account. A study of this nature seemed justified since, on the basis of available evidence, no definitive conclusions could be drawn concerning the effectiveness of this survey as a scholastic predictor. Yet, at least some colleges include the GZTS in an entrance battery or for student counseling, presumably because it bears some relation to scholastic success. Also, on a rational basis, terms such as "Production, Serious-mindedness, Interested in thinking," which are used to describe the various traits, appear as though they might predict some of the non-intellective attributes associated with the better student.

Method

Subjects consisted of an entering freshman class of about 900 students at The University of Akron in the fall semester of 1961. Prior to admission these students were administered the School and College Ability Test (SCAT) and the GZTS. Because of early drop-outs, sickness, and other unavoidable sources of attrition the number of students on whom SCAT scores, GZTS scores, and first semester GPA's were ultimately available was reduced to 776. The mean raw SCAT score for these students was 71.1 with an S.D. of 15.5. This value was equivalent to approximately the 62nd percentile on the national norms for that year, suggesting that these students were fairly typical of the entering college freshman. Pearson *r* intercorrelations were computed between GPA, SCAT, and the 10 GZTS scores. All test scores which correlated significantly with GPA were retained for analysis and a Wherry-Doolittle was subsequently computed to indicate the extent to which various GZTS scores inserted in a multiple R could improve upon the correlation based on a single test of academic aptitude.

Results

The SCAT variable and seven of the 10 GZTS scores correlated with GPA at or beyond the .05 level of significance (Table 1). When placed in a Wherry-Doolittle the following sequential in-

Table 1
Intercorrelations between GPA, SCAT, and Seven GZTS Scores
for 776 Entering Freshmen at The University of Akron

	2	3	4	5	6	7	8	9
1 GPA	.401	-.102	.207	-.120	-.156	-.007	.161	-.144
2 SCAT		-.012	.149	.041	-.213	.015	.216	.221
3 Gen. Activ.			-.120	.348	.382	.157	.066	.043
4 Restraint				.007	-.134	.101	.470	.030
5 Ascendancy					.602	.251	.221	.174
6 Sociability						.193	.089	-.129
7 Emot. Stab.							-.121	.185
8 Thoughtful								.003
9 Masculinity								

creases in the multiple R took place: SCAT, .401; M, .466; R, .487; A, .495; T, .499; E, .499; G, .500; The S.E. of the final R was $\pm .027$.

Discussion

If the S.E. of the R is taken into account, then clearly the small increments subsequent to the addition of the M trait are of questionable validity and may not survive cross-validation. It would therefore seem prudent to confine this discussion to the M trait (Masculinity-Femininity) which represented a definite increase in the prediction of GPA beyond that which was accomplished by the SCAT score alone. The M trait correlated negatively with GPA which would appear to indicate that, to some extent, the less an individual's interests resemble those which typify his (or her) sex the more likely he is to succeed in college. This is not surprising since it has long been acknowledged that college males tend to be more feminine in their interests than their non-college counterparts, and similarly, college females tend to be more masculine in their interests than females who do not attend college. It may be that the M trait, in this context, can be taken at face value as reflecting differential attitudes or interests characteristic of the two sexes; and, since college life supposedly promotes a broadening and liberalization of views, students with less typical and stereotyped interests may be more positively adjusted to and hence successful at their academic endeavors.

In terms of academic prediction, this investigation seems to corroborate previous studies inasmuch as the correlations between GPA and the various GZTS scores were uniformly low and contributed relatively little to the multiple R. The GZTS appears to be of dubious value in the prediction of GPA.

Summary

The Guilford-Zimmerman Temperament Survey was used in conjunction with a scholastic aptitude examination in the prediction of first semester grade point averages for a large class of entering college freshmen. Only one trait (Masculinity-Femininity) contributed any significantly unique variance to the R, raising the correlation from .401 to .466.

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Preliminary Trial of a Three-Dimensional Classification of Occupations

The writer's concern with the problem of classification of occupations arises from a study to determine, among other objectives, the occupational aspirations and the occupational expectations of a population of college undergraduates majoring in agriculture at Delaware Valley College of Science and Agriculture in Doylestown, Bucks County, Pennsylvania.

The occupational aspiration was defined as the occupation an individual chose to be the one he would most like to follow as a career. The occupational expectation was considered to be the occupation which the individual, realizing that there would be obstacles in his way, chose as that which he realistically believed he would follow as a career. It was assumed that the respondent whose two types of choices were the same would experience no conflict, but that the respondent who indicated that his two types of choice were different would experience conflict resulting in occupational frustration.

It became apparent to the writer that an instrument for classifying the two types of occupational choice was needed. As college students al-

most invariably aspire to occupations on the professional and managerial levels, the classification of occupations in accordance with the method proposed by Edwards (1943) and others into the various socio-economic levels was too limited.

Roe (1956) had devised a two-dimensional classification of occupations based on level and field. The level of function dimension was presented in six steps that related to "degrees of responsibility, capacity and skill." The second dimension included eight areas related to interests. Super combined the two-dimensional approach of Roe and the Standard Industrial Classification into a three-dimensional scheme (1957). He indicated that systems based on the one- or two-dimensional approaches were inadequate as they do not describe the occupation completely; the description of an occupation must consider such factors as level of ability required, the field of activity, and the enterprise in which the work is actually carried out. His proposal divided field into eight areas, level into six, and enterprise into nine.

The U.S. Bureau of the Census used a type of three-dimensional approach in its attempt to

index the occupations reported for the 1960 census. This scheme drew heavily from such sources as the Dictionary of Occupational Titles, published by the U.S. Employment Service, and the Standard Industrial Classification, published by the Bureau of the Budget. Its three dimensions were:

Industry, that is, the nature of the business, industry, professional practice, etc., in which he is engaged; *Occupation*, that is, the type of work the person was doing; *Class of worker*, that is, the kind of employment (1960).

The writer decided to employ a *Three-Dimensional Classification Of Occupations* which was a slight modification of Super's original proposal (1957). The two types of occupational choice of the undergraduates were indexed according to: *level*, *field*, and *enterprise*. *Level* was considered a vertical dimension based on the prestige associated with the occupation, the size of the income typically earned, the degree of authority wielded, the freedom of action involved, the amount of education required, and the amount of intelligence demanded. *Field* was a horizontal dimension, the work activity involved in the occupation. *Enterprise* was also a horizontal dimension, "the nature of the business, industry, professional practice, etc." (U.S. Bur. of Census, 1960) in which the occupation was pursued. *Level* had six classifications founded to a great extent on those proposed by Roe (1956) and Moser *et al.* (1956). *Field* was divided into eight areas and was a modification of the fields presented by Super (1957). *Enterprise* employed the twelve categories established by the Bureau of the Census (1960). An outline of the classification is presented in Table 1.

Table 1

An Outline of the Three-Dimensional Classification of Occupations*

Level

1. Professional and Managerial, higher.
2. Professional and Managerial, regular.
3. Semi-Professional and Managerial, lower.
4. Skilled.
5. Semi-skilled.
6. Unskilled.

Field

1. Outdoor and Physical Activities.
2. Social and Personal Services Activities.
3. Persuasive Business and Business Contact Activities.
4. Administrative and Administrative Control Activities.
5. Research and Development Activities.
6. Humanistic Activities.
7. Fine Arts Activities.
8. Commercial Arts Activities.

Enterprise

1. Agriculture, Forestry, and Fisheries.
2. Mining.
3. Construction.
4. Manufacturing.
5. Transportation, Communication, and other Public Utilities.
6. Wholesale and Retail Trade.
7. Finance, Insurance, and Real Estate.
8. Business and Repair Services.
9. Personal Services.
10. Entertainment and Recreational Services.
11. Professional and Related Services.
12. Public Administration (Government).

It was recognized that the classification of the occupational choices in this way would probably disclose, in certain instances, various dimensions of difference between the two types of choices. Therefore, the term, "number of dimensions of anticipated occupational frustration," was introduced to describe the number of dimensions in which the respondent's two occupational choices were different.

Employing the instrument described above, each occupational choice was classified and was assigned a code number. For example, an occupational aspiration, "Veterinarian with private practice," was classified as: *Level*—Professional and Managerial, higher or 1; *field*—Social and Personal Services Activities or 2; and *enterprise*—Agriculture, Forestry, and Fisheries or 1. The code number assigned to this choice was 1-2-1.

Assuming that the occupational expectation of this respondent was "Salesman for a pharmaceutical company selling drugs to veterinarians," the indexing and coding would be: *level*—Semi-Professional and Managerial, lower or 3; *field*—Persuasive Business and Business Contact Activities or 3; and *enterprise*—Wholesale and Retail Trade or 6. The code number designation was 3-3-6. Therefore, this respondent's occupational aspiration and his occupational expectation differed on all three dimensions: 1-2-1 compared to 3-3-6.

The writer's classifications of the two types of occupational choices of the respondents in the study were compared with those of the Registrar of the College to determine if the instrument served the purpose for which it had been devised. The Registrar was familiar with the occupations normally chosen by the undergraduates and graduates of the College as he had assisted the investigator in conducting the institution's placement program for approximately five years. The writer and the Registrar independently coded the two types of occupational choices of the 339 respondents. Coefficients of correlation were calculated from the obtained classifications. From the high agreement between the classifications of the two associates, a correlation coefficient of 0.94, it appeared reasonable to assume construct validity for the instrument.

* (Based on modifications of Roe and Moser for *level*, Super for *field*, and adoption of the Bureau of Census approach for *enterprise*.)

Of the 339 undergraduates in the study, 151 indicated a discrepancy between their occupational aspirations and their occupational expectations. These 151 responses were divided rather evenly within the three dimensions of anticipated occupational frustration. Some students showed discrepancies in only one dimension, others in more, i.e., 41 with one dimension, 60 with two dimensions, and 50 with three dimensions. While further work is needed to follow up this idea of discrepancies between aspirations and expectancies, this *Three Dimensional Classification of Occupations* might be useful to others in their counseling and research activities.

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Test Reviews

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Norman C. Meier. *Aesthetic Perception*.
Iowa City: Bur. Ed. Res. & Svce., Univer.
of Iowa, 1963.

The *Aesthetic Perception* test is issued in preliminary form as the second of a contemplated battery of three tests measuring different facets of aesthetic sensitivity. The first test in the battery, the well-known *Art Judgment Test*, was published in revised form over twenty years ago. Publication of a third test measuring "creative synthesis" is promised in about one year.

The instrument presently under consideration is theoretically based on the proposition that aesthetically sensitive persons are able to discern subtle aspects of artistic production with aesthetic significance, whereas these are lost to less sensitive persons. Aesthetic perception as measured by this test is not to be confused with simple accuracy of perception. The problems posed in the test are concerned neither with naturalistic projection nor faithfulness to a model. Instead, each problem shows a work of art reconstructed in four versions with instructions to rank these from best to worst. The rankings are to reflect such considerations as proportion, unity, balance, and general satisfaction produced by the work. For the most part, the test items are constructions suggested by actual works of art.

Statistical Characteristics

The test manual is clearly labeled "preliminary," and a revision is promised at some future date. However, the presently available preliminary manual is supposed to provide for the test's use until the revision is published. This manual does not provide even the minimum amount of statistical evidence ordinarily anticipated for operational instruments.

Even the scoring key now distributed with the test is tentative. This key "... represents a combination of judgments of a limited number of artists and about 350 art students and teachers." The way in which these judgments were combined to produce a scoring key is not clarified.

The earlier experimental form the test, consisting of 70 items, was administered to a pilot group. Item analyses of the resultant data produced the present set of 50 items. The manual states that when these 50 items were tested, the results indicated that the new version was "... a far superior and sensitive instrument." Presumably,

the comparison here implied was with the pre-item analysis version.

The test as published has been administered to approximately 350 high school students taking art and to 350 college-adult subjects. The results of these administrations provide what norms are now available.

Reliability data are not cited. Validity of a sort is inferred from a progression of mean test scores obtained for mature artists, younger artists, and high school students taking art.

In view of the paucity of data now available for *Aesthetic Perception*, including the lack of reported correlations with other tests, the reviewer was surprised by the following rather strong statement in the manual: "Insofar as the test is not predicated upon learning, general intelligence, or general physiological maturation, it would seem very probable that the test is measuring something basic in the art-ability complex." Although the test may not be predicated upon learning, intelligence, or maturation, it may nevertheless be reflecting some or all of these conditions in spite of its face validity.

Summary

Aesthetic Perception is an experimental test probably measuring something related to artistic ability. The nature and utility of the functions measured are not clarified by the data provided in the preliminary manual. The independence of these functions from those measured by the *Art Judgment Test* also remains to be demonstrated.

H. M. Bell. *Adjustment Inventory: Student Form*. Palo Alto: Consulting Psychol. Press, Inc., Rev. 1962.

The *Adjustment Inventory* has enjoyed relatively widespread use since its original publication thirty years ago. The 1962 revision retains the four original scales without changes in their item content, and adds two newer scales taken from the 1957 experimental edition of the inventory. The six measures of personal and social adjustment are identified as: (a) home adjustment, (b) health adjustment, (c) submissiveness, (d) emotionality, (e) hostility, (f) masculinity-femininity. The manual provides fairly extensive discussions of the purported meaning and significance of each of these measures.

The inventory is self-administering, requires a trichotomous response, and ordinarily is completed within thirty minutes.

The current revision has been newly normed for high school and college students. However, the normative groups are quite small (approximately 300 for each sex) and far from representative.

Corrected split-half reliability coefficients for the six subscales range between .80-.89. Inter-correlations between these scales generally are low.

The manual contains an extensive bibliography in which the author has attempted to cite all in-

vestigations with the *Adjustment Inventory* since its original publication. Most of these references relate to the validity of the four original scales.

New validation information in the manual consists of comparisons between test results and counselor ratings, and of evidence bearing upon construct validity.

On the whole, the revision of this inventory is not likely either to encourage or discourage more widespread use of the instrument.

Book Reviews

Comments on Current Books and the Passing Scene

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They had quite a flap about psychological testing in our nation's capital and in adjacent Montgomery County, Maryland a few months ago. Even Senator Barry Goldwater got in the fracas. The Educational Testing Service arranged to have an experimental 284-item questionnaire administered to students in Montgomery Junior College, among other institutions. The questionnaire had previously been given without incident to more than 30,000 students in 24 colleges. But in Montgomery the students apparently understood that they had to sign their names to the questionnaires. Certain of the items asked how the students' parents usually leaned in national politics, what the parental income was and was it earned or unearned, what the father's religious background was, etc. Because of the highly personal nature of such items, strong objections were raised and a public uproar followed. The questionnaire was labeled a "snooper poll" by some newspapers and "an invasion of privacy" by others. Senator Goldwater's blast was headlined "Big Brother in the Classroom" and made invidious comparisons with Orwell's 1984. ETS prepared an open letter which explained in detail the nature of its research program in relation to the controversial questionnaire. However, the reasoned, sensible statement by ETS officers did not produce a noticeable abatement of the outcries. ETS emphasized that students were not required to sign their names and that any and all replies were completely confidential. Those who raised the alarm were not satisfied and ETS decided to burn the questionnaire.

From the remote vantage point of your Column Editor it appears that somebody grossly underestimated the level of suspiciousness in our population, suspiciousness that is not confined to any one group. Our social-political atmosphere is charged with thundercloud issues relating to such things as members of one political party voting with the opposed party, expense accounts and income tax, unrest related to race, religion, etc. Under these circumstances questionnaire items touching upon such issues are a source of threat and are not likely to be answered honestly when names are signed. But the items are likely to trigger a reaction of paranoid alarm, a sad commentary on the state of things today. It seems a safe bet, however, that a lot of people learned a lot about social climate and questionnaires.

Another topic in the news of interest to counselors is automation. At the American Federation of Labor convention last fall, automation was reviled as a curse and a disaster for humanity. There isn't anything new about automation, of course, nor about objections to it. About one and one-half centuries ago, for example, the Lancaster weavers smashed the automated looms of their day without perceptibly halting the trend of change. What is new about today's impact of automation is the range, complexity, and number of jobs being taken over by automatic operations. Machines can now translate foreign languages into English or render the spoken word onto typed pages directly—tasks that we never believed could be automated. It all means that in a decade or two half the population will have to support the other half in what is essentially idleness in the form of very short work weeks, very early retirement, make-work programs, etc. It also means that counselors and other mental health workers are going to be in exceedingly short supply. Many people will not be needed in our emerging strange, new, robotized society; yet they are not the misfits in the usual sense. They will be the normal people who today are the muscle and sinew of our society. But they lack the talent and skills to design, build, repair, program, or manage the new machines and the new economy. They are not stupid but neither are they bright. What are they to do? How will they react? The chances are that we shall be faced with problems of delinquency and crime that dwarf our present problems and the frequency of disorders such as alcoholism, depression, neurotic reactions, and the like will rise markedly. Counselors will surely be dealing with these problems in greater numbers. Then, there are the gifted, those who are needed to develop and operate our technological culture. Counselors will have to identify them, help them work out their programs, guide them. It's a big order and we already lack counselors. The Greyston Conference Report on Counselor Training will be coming out this year and will undoubtedly offer considerable help. Counselors Donald Super and Albert Thompson have already shaped a splendid conference program.

Footnote on paperbacks. Now and then your Column Editor has pointed out that there is a wonderful selection of paperbacks on personality, counseling topics, psychology generally and

specifically, etc. The books cost from 25 cents to around two dollars and there are a lot of them. But they aren't the best sellers. The current best sellers are the *Tarzan* books by Edgar Rice Burroughs. About one out of every thirty paperbacks now sold in the USA is about Tarzan. Curiously, a couple of years ago practically none was being bought. The reason for Tarzan's revival is that a prudish librarian withdrew Tarzan from circulation a couple of years ago on the grounds that Tarzan and Jane were living together but not married. It turned out that they *had* been married by Jane's clergyman father, as any Tarzan fan worth his salt would know. Just how this vindication and the accompanying newspaper uproar sold over 10 million Tarzan books in a year and one-half is still a mystery. Memo to myself—must get me some Tarzan books.

Counselors ought to like *Taboo Topics* (Athenion Press, 1963) edited by Norman L. Farberow for the book touches on many sensitive areas that counselors have had to handle with varying degrees of adroitness in their professional careers. Editor Farberow chaired a 1961 APA Convention symposium on the subject and, from that session the present volume developed. Gordon W. Allport wrote the foreword and set the tone effectively for the work. One paragraph is poignant in Allport's observation that, "Perhaps the cruelest strain on the investigator is the questioning of his motives, not only by laymen but by professional colleagues as well." (p. xi). This poignancy is a thread visible in the fabric of each chapter prepared by the various authors.

Herman Feifel has studied death but not without obstacles, as he makes clear in his chapter. Death is a taboo topic and his attempts to interview and test seriously or terminally ill patients were at first blocked. Eventually, he was given grudging, partial consent for his research. Significantly, the patients welcomed the opportunity to talk about death; for they were aware in varying degree of the false reassurances and the cheery evasions showered upon them. It may be significant in this connection that a study of 40 physicians showed they *think* less about death than control groups but they *fear* death more. Wardell Pomeroy's chapter deals with his association with Dr. Kinsey and their joint research on human sexual behavior. Surprisingly, the biggest problem was not obtaining complete sexual histories from their subjects. Of 18,000 cases, fewer than ten percent refused to complete their histories after the interview had begun, a remarkable tribute to the trust placed in the interviewers. The major problems were selecting personnel with security and competency in mind, the lurid publicity that often accompanies the research, imposter interviewers, and unauthorized "commentaries" on their projects, etc. By contrast, the study of suicide as reported by E. S. Schneidman is chiefly a problem of obtaining accurate data, so powerful are the taboos and so confused are recording pro-

cedures. Some suicides, for example, are reported officially as "accidents," others are never listed as suicides unless there is a verified, holographic suicide note. Research on male homosexuality has the same difficulties Pomeroy and Kinsey encountered plus several others. Evelyn Hooker describes the obstacles to getting a reasonably representative sample of male homosexuals. It was not hard to locate subjects *per se*; indeed some were eager to be interviewed. But Dr. Hooker soon learned that these subjects were not the valid cross-section of the homosexual community she required. Another obstacle, more of an irritant than a problem, was the impugning of her motives.

Taboos with respect to investigations of suicide, death, homosexuality, etc. seem to cut across all social and educational levels. Other taboos seem to be restricted to a particular group. Topics like parapsychology, graphology, religion, hypnosis, and world peace are readily, even avidly, discussed by the population at large but often frowned upon by small but influential groups. For 40 years or more, Gardner Murphy has been examining parapsychological phenomena. He notes that investigators in this field no longer get as many snide remarks as they did 20 or 30 years ago, but the question of scientific respectability and parapsychology still endures. The taboo seems to center in what is a proper area of scientific study and, for most scientists, parapsychology is not such an area. Daniel S. Anthony discusses graphology as a taboo topic, pointing out that few American psychologists know much about the field. Actually, one wonders whether graphology is really a taboo topic. May it not be more accurately described as a neglected topic? There are practically no college courses on graphology, as Anthony correctly notes, but neither is there much solid research to build a course around. It seems likely that time will remedy the situation. One might say the same thing of William Douglas's discussion of religion as a taboo topic. Popular 50 years ago as a field of scholarly inquiry, religion has failed to develop as an area of psychological study. No one is opposed to a psychology of religion but very few are interested in it, a condition which is slowly changing, according to Douglas.

In writing about hypnosis, John G. Watkins remarks that the vaudeville-type quack hypnotist usually gets a far better press than the serious investigator of such phenomena. The history of scientific interest in hypnosis has been one of boom and bust. Watkins traces the most recent boom to Freud's disavowal of hypnosis as a method of treatment. The current interest which is not yet a boom seems to be fairly solidly based on controlled investigations and appears to be achieving a grudging acceptance among scientists. The last chapter in *Taboo Topics* is Charles E. Osgood's commentary on peace research. All the chapters in Editor Farberow's book are thought-provoking; yet Osgood's is especially so

because one would assume that every reasonably normal human being wants, craves, demands peace. After all, what matters *anything* if no one survives? Hence there is really no alternative to peace, not with today's weaponry. But, as Osgood found out, it is all right to be in favor of peace but quite another thing to propose methods of ensuring peace. Such proposals somehow become "plans for surrender" or "appeasement" and the proposers are "peaceniks" to quote a few of the more polite descriptions. Osgood is a sensible psychologist who is dedicated to the cause of peace. He works for all humanity in the face of fierce calumny and foul insult. His work takes courage and, thank goodness, that he has.

Various and sundry. Everett Lee Hunt is a retired dean of Swarthmore College and he has written *The Revolt of the College Intellectual* (Human Relations Aids, 1963). While the book is essentially a case history of Swarthmore, it does reflect the changing attitude systems in American, especially east coast, colleges and universities. Dean Hunt describes three periods of collegiate education: the custodial or guarded education, conformity to accepted ways, and intellectual individualism. He devotes most of his pages to the spread of the intellectual ferment that seems to be replacing the zis-boom-bah behavior of students. Only a few colleges, of course, make a campus hero out of the student who is an intellectual giant. But there are some signs that the trend is in that direction. Panty raids and football rallies seem to be slowly giving way to civil rights demonstrations and to competition of an intellectual, non-athletic form. College students still rebel against authority but the issues of rebellion have changed. In the nineteenth century the big issues were whether women should be educated with men and, if a college were already coeducational, should women eat at the same table as men. In current times the issue is still women but now it is whether women should visit men in the dorms and, where such visiting is permitted, should the doors be closed. Today's Swarthmore students, according to Dean Hunt, agree on the women-in-the-room-with-the-door-closed policy but the reasons vary. One group felt that administrative requests for open doors when women were guests was evidence of undue suspicion about male and female college students. Another group cited the Kinsey report as evidence that the average college male was supposed to have two orgasms per week. By implication, the students were not sufficiently emancipated to have the door open at such times.

To some extent the eastern colleges are harbingers of what happens at other colleges. Thus college counselors can possibly get some advance notice of what they will be up against in the way of future problems. In any case counselors will find Dean Hunt's book surprisingly lively.

While we are on the topic of counseling in colleges, we may do well to look at *Psychological*

Counseling in a Small College by Eugenia Hanfman, Richard Jones, Elliot Baker, and Leo Kovar (Schenkman Publishing Co., 1963). It is only 131 pages long but it packs a lot of good sense between the covers. It deals with four topics: the organization of a small college counseling service, establishing a psychiatric service, specific features of therapeutic work, and the relationship of psychology courses to counseling. The presentation has a down to earth practicality with little concern for theory. Some features are rather unique, such as the counseling and psychology course sections. The experienced counselor will find the book to be somewhat limited in value but the relative newcomer to counseling will gain much to benefit him in his daily work.

Every now and then your Column Editor has the opportunity to visit a really big research facility where they are studying the interview, group processes, client behavior, etc. It is research with a capital R and the apparatus looks like Las Vegas on Saturday night—lights flashing, buzzers buzzing, clickers clicking. The project is usually simple enough but the equipment is awesome. Tom N. Cornsweet has a book to help unravel all that wire behind the apparatus. It is *The Design of Electric Circuits in the Behavioral Sciences* (Wiley, 1963) and it's made for people who know nothing of circuitry. It starts out with such very basic questions as "What is resistance?", "What is a battery?", and answers them, often with pictures. It ends with feedback and null-sensing devices. All is painlessly and effectively presented. So, if you are thinking of research that requires electronic gadgets, Cornsweet's book is for you. Should you care to go a step further, S. S. Tomkins and Samuel Messick have edited *Computer Simulation of Personality* (Wiley, 1963). You don't need to know anything much about computers to appreciate the book but you do need to know something about personality and personality theory. As the title indicates, the book is concerned with testing various problems and theories in the area of personality by means of computers. The presentations are remarkably clear and, at times, even spicy—take George Kelly's simulator discussion and his closing descent into poesy:

There was once a passionate dame
Who wanted some things made plain,
So she punched up the cards,
Filled tape by the yards,
But—somehow— it just wasn't the same

About a year-and-a-half ago, your Column Editor put several publications in a special place in order to make sure he would review them for the next "Comments" column. Well, you can guess what happened. He came upon them just recently and, abashedly, he invites your attention to a couple of the items. One is *The MMPI: An Outline for General Clinical and Counseling Use* by Robert R. Carkhuff of the University of

Buffalo and published in 1961 by Carkhuff himself. It is what the title announces it to be, an outline of the MMPI scales and their meaning. The descriptions are succinct and clearly expressed. The outline is printed in offset on letter-size sheets. An 87-item bibliography is included. The other better-late-than-never publication is *Clinical Psychology* by Norman D. Sundberg and Leona E. Tyler (Appleton-Century-Crofts, 1962). These writers have maintained their record of sound scholarship in this book. Their approach represents ways of thinking about clinical problems in terms of research and in terms of clinical practice. The presentation is at the graduate student level and it is good.

The U. S. Public Health Service has a couple of pamphlets at 20 and 25 cents each respectively which may be useful to counselors who deal with a broad range of clients. *Mental Disorders of the Aging* (U. S. Government Printing Office, 1963) is USPHS Publication 993 and it should be meaningful to families who are striving to understand the disturbed behavior of an aged relative. *Narcotic Drug Addiction* (U. S. Government Printing Office, 1963) is Mental Health Monograph No. 2. It is a useful orientation to the problem of drug addiction in nontechnical language. Both pamphlets are convenient for counselors who may wish to give family members something to read that will help them understand a client's problem. Counselors who work closely with teachers will find *Youth in Conflict* by Bennetta Washington (Science Research Associates, 1963) helpful in assisting teachers to understand problem youngsters in a school setting. The reference list for further reading, by the way, is excellent. While we are on the subject, we may note that SRA has also published *Work-Study Programs for Alienated Youth* by George W. Burchill (Science Research Associates, 1962). The book is a report sponsored by Phi Delta Kappa under the supervision of an imposing list of project commission members such as Robert Havighurst, Lindley Stiles, C. C. Trillingham, etc. It presents solid case histories of nine work-study programs for alienated youngsters. In this it is unique. It is also unique in that it is a rather dull presentation of what should be a gripping and challenging topic. The kinds of work-study programs author Burchill describes are varied and deal with small and large groups in settings which range from farm-home placement to public schools.

Biographical Note Department. In your daily counseling activities, Gentle Reader, do you have any personal problem areas of sensitivity which makes you recoil from trying to help clients with similar problems? Your Column Editor does. In well over 20 years of counseling he has uniformly referred clients with difficult religious problems to another counselor. He learned early that the tortured client, tormented by what appeared to be inconsistencies of faith and reason, seemed to

pry open his own logic tight compartments whose hatches were battened down only after grievous struggles long ago. They tore asunder the scars of old wounds that were long in healing. Thirty-five and more years ago the church, as your Column Editor encountered it while preparing for his confirmation, had a single handy-dandy answer for any problem, a kind of Dr. Panacea's patent medicine cure-all for any ailment. This was prayer. If you clouted a fellow catechumen who annoyed you, you had to pray for forgiveness. If he bloodied your nose, you were to pray that he would see the light of compassion. The oaken-pated adolescent had to pray for help in learning that Genesis came before Exodus while the bright youngster had to pray for humility when he popped up with the answer to a question directed to someone else. The problems of youth were simply not understood and certainly not recognized. Perhaps now they are. In *Profiles of Church Youth* by Merton P. Strommen (Concordia Publishing House, 1963), for example, we have a most satisfying study of 3,000 Lutheran high school students. It is a unique study, not only in its candor, but also for its controlled sampling and objective interpretation of data. No punches are pulled and no holds barred. Everything is there without whitewash—unmarried mothers, premarital sex, dirty stories, drunkenness, and other less touchy problems. It took courage for the Lutheran Church to publish this book, the first of its kind, and it took real ability to present it as effectively as author Strommen has. O would that it had been published a generation or two ago!

Sarah E. Lorenz. *And Always Tomorrow.*
New York: Holt, Rinehart and Winston,
1963.

This is a mother's first person account of a family's unrelenting efforts to help a mentally ill son. In putting this valiant ordeal on paper, Mrs. Lorenz has a great deal in common with Clifford Beers. It is regrettable that, in all the years since *A Mind that Found Itself*, we still live in a culture which prompts Mrs. Lorenz to use a *nom de plume* and which still leaves so much to be desired in helping minds find themselves. Inadequacies in the people and services offered to the mentally ill are pointed up poignantly and not too bitterly considering the gamut which was run from private psychiatrists; a child guidance clinic; a short term private hospital; a cottage-clinic combination for emotionally disturbed children; insulin; EST; a custodial state hospital where the most encouraging words given the parents by the psychiatrist were that their son was "no management problem"; were that their son was "a living-in hospital for parents thiorazine; a \$1,000 a month hospital; "The Family Program" which was a living-in hospital for parents as well as the "impaired member" which involved the father taking a year's leave of absence from his job; and eventually, but hopefully not

finally, to the same state hospital which had become more treatment oriented in the meantime.

In their diligent, hang-the-expense pursuit of therapy, Mrs. Lorenz writes, "We received help and solace from several but strangely almost never in a tight spot . . . I can think of only two who possessed the sincerity, the dedication, the understanding so essential to a doctor of the mind . . . It is a quality that exudes from a human being, a natural something that no course of study or school of thinking can supply."

Professionals need not get too defensive about her indictments because she does not present them vindictively and there is undoubtedly more

than a modicum of truth in them. We often speak smugly about overprotective, rejecting schizophrenogenic mothers and passive fathers and "affix blame." After all, there may be organic factors and even if schizophrenia is purely psychological, parents do not will a schizophrenic child; therefore, the eloquent anguish of mothers like this must be given serious attention. The book is recommended as a part of the acceptance process for parents of the mentally ill (with guidance) and as good therapy for mental health professionals.

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Accepted Manuscripts for Publication

Intraindividual Variability Findings for a Psychotic Population on Vocational Interest Inventories. Samuel F. Klugman, Veterans Administration Hospital, Coatesville, Pennsylvania. 12-17-62.

The Application of Certain Principles of Client-Centered Therapy to Short-Term Vocational Counseling. George D. Demos, Long Beach State College. 4-29-63.

Experiencing and the Supervisory Relationship. James C. Hansen, State University of New York at Buffalo and Edwin N. Barker, Ohio State University. 10-7-63.

A Multi-Dimensional Approach to Self-Concept in Three Patient Groups. C. Marshall Lowe, Veterans Administration Hospital, Brecksville, Ohio. 10-14-63.

Case Report: On the Meaning of Symptoms. V. Edwin Bixenstine and Horace A. Page, Kent State University. 11-4-63.

Comment on Stimulated Recall in Therapy Using Video Tape. Jacqueline Bernard, Department of Public Welfare, St. Paul, Minnesota. 11-13-63.

The Use of Non-Professional Auxiliary Counselors in Staffing a Counseling Service. L. V. Harvey, Attorney-General's Department, Canberra, Australia. 11-13-63.

A Factor Analysis of the Berger Willingness to Accept Limitations Scale. LeRoy A. Stone, Kansas State University. 11-13-63.

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The Professional Preparation of Counseling Psychologists

The 1964 Conference on the Professional Preparation of Counseling Psychologists, second of its kind, took place at the Greyston Conference Center of Teachers College, Columbia University, this January 23 to 26. Already recorded in spoken history as *The Greyston Conference*, it bids fair to have as much impact on the history of counseling psychology as the first, Northwestern, Conference of 1951.

The full report of the Greyston Conference will be published and distributed free to all members of APA Division 17, and to appropriate other persons, next fall. In the meantime, this page provides opportunity for a very brief preliminary report on some aspects of the Conference.

It was organized by the Division of Counseling Psychology in the conviction that, more than ten years having passed since the official birth of our field, the time had come to review training activities and related matters. The writer and Albert Thompson served as co-chairmen of the conference committee, aided by Ralph Berdie, Frank Fletcher, Harold Seashore, David Tiedeman, Robert Waldrop and Henry Weitz. Invited participants, limited by necessity to 60, included representatives of all APA approved counseling programs, of selected departments which have not sought APA approval but which produce counseling psychologists, of selected employers of counseling psychologists and of agencies which subsidize training in this or in related fields.

Basic papers were prepared by Francis Robinson (*Counseling Psychology: 1951-64*), Joseph Samler (*Where Counseling Psychologists Work, What They Do, and What They Should Do*), John Darley (*The Substantive Bases of Counseling Psychology*), Leona Tyler (*The Methods and Processes of Appraisal and Counseling*), Roger Myers (*The Content and Character of Training*) and Ralph Berdie (*Assumptions Underlying Previous Recommendations*). Arthur Brayfield, Edward Bordin and Robert Waldrop served as invited discussants. There was intensive small group discussion of each paper. One day was given to work by commissions of seven or eight people each, examining the issues which had been raised, raising others, and considering possible recommendations. The closing, plenary, session reviewed the committee's proposals for the final report, approved recommendations and decided upon the final method of editing the report. The first draft has since been sent to participants for criticism, has been reviewed by the Division Executive Committee at its Spring Meeting and is now being edited for publication. It will include, in addition to the report and recommendations, the basic invited papers and selected historic documents on training in counseling psychology.

What does the report say? It reaffirms and expands earlier statements on training. It recommends both the recognition and development of vocational psychology as a unique component of counseling psychology, and the continuing expansion of knowledge and services for the furtherance of individual development (e.g., the use of the educational, familial and community environments, and playing the consultant role). Action is recommended for improving the financial support of training in counseling psychology, for improving the flow of qualified candidates, for strengthening the identity of training programs and for better utilizing existing centers for the preparation of counseling psychologists (e.g., departments of educational psychology or guidance which could meet standards but which have not sought APA approval). Practicum centers, language requirements, type of degree and research as well as counseling roles also received consideration.

There will be a symposium on the Conference at the APA meetings in Los Angeles this September; it is hoped that the Report will be in members' hands by that time.

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Experiencing and the Supervisory Relationship

James C. Hansen

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An investigation of the extent to which the level of the supervisor-trainee relationship was related to the trainees' level of experiencing. Twenty-eight trainees were randomly divided into three groups and assigned to different supervisors. Two groups of trainees perceived significantly different relationships with their supervisors and also achieved significantly different experiencing levels. However, correlations within the groups failed to reach significance. One supervisor's perceptions of the relationship were significantly related to the level of experiencing his trainees achieved. Likewise, only the discrepancy in perception of the relationship between one supervisor and his group of trainees was significantly related to their experiencing level.

There are many facets to a supervised practicum, including practical application and integration of the principles and methods which the trainee has studied. However, it may also provide opportunities for enhancing the trainee's concept of himself. The practicum provides learning situations which can facilitate the optimal growth of the person by freeing his potentialities to be himself. In that respect it is therapeutic in nature. Patterson (1963) noted that practicum supervision, while not therapy, should be, like all human relationships, therapeutic.

The theory and research of the client-centered group have focused directly on the nature of the relationship. They have been primarily concerned with how a counselor can provide a relationship which the client can use for his personal growth. Should we not concentrate as much on the supervisory relationship if we are to provide opportunities for the trainees to develop their sensitivity and understanding?

Rogers (1962) suggested that such studies as Barrett-Lennard (1959), Gend-

lin (1961) and Truax (1961), if confirmed by further research, have significant implications for the training of counselors. "By feeling understood and accepted in their training experiences, by being in contact with genuineness and absence of facade in their instructors, they would grow into more competent counselors. There would be as much focus in such training on the interpersonal experiences as on the intellectual learning." Walz (1963) stated that the practicum supervisor should emphasize the relationship between himself and the trainee; that unconditional positive regard, empathy and warmth are as appropriate for the trainee as the client.

The term "experiencing" refers directly to ongoing feeling processes to which an individual can directly refer in his phenomenal field. Experiencing is a changing process, a continuous stream of feelings, and some few explicit contents. Thus, experiencing may be defined as the directly referred to "feel" of some situation, concept or personal relationship (Gendlin, 1962a). The higher the experiencing level of the person, the more open he would

be to his own feelings, attitudes, values and personal meanings, hence more sensitive to himself.

Gendlin (1962b) has mentioned some characteristics of effective training situations which affect the trainee's level of experiencing. He feels that there must actually be a freedom for the trainee to express and accept his own direct experience with practice, his troubles, and his torn feelings. The trainee must also see himself and the client as real people. We must eliminate the false front. We should start right out to train the counselor to be himself in a helpful way.

The essence of supervision comes in the relationship between the trainee and the supervisor as they discuss the client, the trainee's counseling techniques, and his sensitivity and understanding. The present study was designed to investigate the extent to which the level of the supervisor-trainee relationship was related to the trainee's level of experiencing. More specifically, the study was designed to answer the following questions: To what extent is the level of the supervisory relationship, as perceived by the trainees, related to the trainees' level of experiencing? To what extent is the level of the supervisory relationship, as perceived by the supervisor, related to the trainees' level of experiencing? Is the discrepancy in their perceptions of the relationship related to the trainees' level of experiencing?

Method

Subjects

The population of trainees consisted of 28 graduate students in an N.D.E.A. Counseling and Guidance Institute during the academic year 1962-1963. There were 8 women and 20 men who participated in their first supervised counseling practicum. The trainees were randomly divided into three groups and assigned to three different supervisors who worked with them throughout the practicum. The first supervisor had supervised two previous practica, while the second and third had each supervised one practicum.

Instruments

The Relationship Inventory is a rating scale for measuring the nature of a counseling relationship. It was developed by Barrett-Lennard (1959) at the University of Chicago and is based on Rogers' necessary and sufficient conditions of therapeutic personality change. The client form used in this study is a paper and pencil inventory on which the trainee described his perception of the nature of the relationship with his supervisor by indicating the degree of his agreement or disagreement with 72 statements about his supervisor. The therapist form was filled out by the supervisor as he described his perceptions of the nature of the relationship. The items are identical except for a suitable change in pronouns.

The Experiencing Scale was developed by Gendlin and Tomlinson and is based on Gendlin's theory of experiencing. It is a "process" scale in that it is designed to measure stages in the process of experiencing. It is a rating scale to be used by judges who rate interview material from tapes or typescripts on the basis of a seven-step scale. Rating can vary from the low end of the scale where immediacy of experiencing is absent, through the middle stages of intellectualizing experiencing, describing it in the past, recognizing that an inner referent does exist, conceptualizing and expressing as it occurs, to the high end of the scale where there is "free movement in a continuing stream of felt referents" and the individual lives in terms of present experiencing rather than interpreting the present in terms of the past.

Procedures

Following the last supervisory meeting, each of the 28 trainees rated the supervisory relationship with his supervisor on the Relationship Inventory. Likewise, the supervisors rated the relationship as they perceived it with each trainee.

At the conclusion of the practicum each trainee was asked to have a special interview with his supervisor. In this recorded interview, he was asked to respond to his practicum experiences in terms of what was

significant or meaningful for him. Three two-minute segments from each tape were randomly placed on a master tape and were later analyzed in terms of the trainee's experiencing level, using Gendlin's Experiencing Scale. Two judges, after training together on practice tapes, independently rated the samples for experiencing level. The mean score of the two judges was used as the trainee's level of experiencing at each point. A mean of the three scores for each trainee was then taken. Out of a possible range of seven steps or points, the two judges had 62 per cent of their ratings within a half step of each other, and 93 per cent within one step.

Results

One of the primary findings in this study was the variability of the level of relationship reported by the trainees in the separate groups. Because the trainees in the groups were randomly selected from the same population, it may be assumed that the supervisor in each group was the main affecting variable.

Because of the variability in the groups some interesting conclusions may be drawn concerning the supervisory relationship in the counselor education process. Table 1 presents the mean score of the descriptions

of the relationships as perceived by the trainees, and Table 2 presents the mean score of the descriptions by the supervisors.

From Table 1 can be seen that the trainees in group 1 rated the Relationship Inventory consistently higher on all of the sub-measures and total than the trainees in the other two groups. The trainees in group 3 scored the sub-measures and total Relationship Inventory consistently lower than the other two groups. These results indicate that the trainees in group 1 perceived their supervisor as having a higher level of regard, empathic understanding, and unconditional regard and as being more congruent; thus, having a better supervisory relationship than the other two groups. The trainees in group 3 perceived their supervisory relationships as less favorable than did the other two. In the analysis of the group means, one *t* test was found to be significant. The difference between groups 1 and 3 was significant at the .01 level ($t = 3.58$, $df = 1.17$) indicating that the trainees in group 1 perceived their relationships significantly higher.

Table 2 shows that the supervisors' scores on the Relationship Inventory were not so consistent. However, except for Level of Regard, supervisor 3 scored his relationships consistently lower than the other supervisors.

Table 1
Group Means of the Trainees' Relationship Inventory Measures

Trainee's RI Measures	Group 1 (N=9)	Group 2 (N=10)	Group 3 (N=9)
	31.3	31.1	26.7
Level of Regard	30.0	24.2	19.1
Empathic Understanding	34.7	29.3	25.1
Congruence	24.8	20.2	13.1
Unconditionality of Regard	121.0	103.8	84.1
Total RI			

Table 2
Group Means of the Supervisors' Relationship Inventory Measures

Supervisors' RI Measures	Supervisor 1 (with N=9)	Supervisor 2 (with N=10)	Supervisor 3 (with N=9)
	29.7	38.1	30.7
Level of Regard	20.6	12.4	13.0
Empathic Understanding	32.4	23.6	23.4
Congruence	20.0	27.9	7.5
Unconditionality of Regard	104.3	106.8	74.5
Total RI			

pervisors, thus showing he perceived his supervisory relationships in a less favorable light. In fact, he rated the total relationship lower than his trainees. Supervisor 2 rated his total relationships highest of the three supervisors and slightly higher than his trainees. Supervisor 1 rated his supervisory relationships in between the other two supervisors but lower than his trainees. This means that the trainees perceived supervisor 1 to have a higher level of regard, unconditionality of regard, and empathic understanding and to be more congruent than he perceived himself. The analysis comparing the group means revealed that supervisor 3 and 2 differed ($t = 5.21, p < .01$), and supervisor 3 and 1 differed ($t = 3.63, p < .01$), indicating that supervisor 3 had significantly lower rated relationships.

From Table 3 it may be seen that the trainees in group 1 were rated by judges as scoring consistently higher than the other two groups on the Experiencing Scale, and group 3 scored consistently lower. This indicates that the trainees in group 3 were more remote from their experiencing and from their feelings, more likely to be cautious and defensive in this relationship. Experiencing had to be safely in the past before meanings could be drawn from it, while the trainees in group 1 were more sensitive to the changingness of their experiencing and feelings. The analysis comparing the groups revealed a significant difference between the groups. The trainees in group 1 differed with group 2 ($t = 2.21, p < .05$), and with group 3 ($t = 3.67, p < .01$), indicating the trainees in group 1 achieved significantly higher experiencing scores.

The relevance of the supervisory relationship to the trainee's level of experiencing may be seen. There is a relationship

between the trainee's perception of the supervisory relationship and his level of experiencing. The trainees in the first group perceived their supervisory relationships as better and they also achieved the highest experiencing scores; trainees in the second group perceived their relationships less favorably and achieved lower experiencing scores; while the trainees in the third group reported the least favorable relationships and achieved the lowest experiencing scores.

This possibly means that because the trainees in group 1 perceived the supervisor as being congruent, as having a high level of regard, empathic understanding and unconditional regard for them, they felt the atmosphere safe enough to examine their feelings and experiences. Possibly because the trainees in group 3 did not perceive such an atmosphere, they were unable to reach as high a level of experiencing.

One might assume that within the groups the trainees' perceptions of the relationship would correlate with their judged experiencing level. However, within groups 1 and 2 the correlations (Pearsonian) failed to reach significance. In the third group there was a negative correlation, significant at the .01 level, between the trainee's perception of the relationship and his level of experiencing. This indicates that, within this group, the trainees who achieved the higher experiencing scores perceived a poorer relationship, and the trainees who were more defensive reported a better relationship. One may speculate that this result was due to an accurate perception by the less defensive trainees of an objectively poor relationship, and a "socially desirable" report by the defensive trainees.

Are the supervisor's perceptions of the supervisory relationship within each group

Table 3
Group Means of the Trainees' Experiencing Scale Scores

	Group 1 (N=9)	Group 2 (N=10)	Group 3 (N=9)
Experiencing Scale Scores	2.37	2.09	1.92

related to the trainee's level of experiencing? Only the first supervisor's Relationship Inventory scores and his trainees' Experiencing Scale scores correlated significantly at the .01 level. This means that the trainees with whom he perceived himself as being congruent, having a high level of regard, unconditionality of regard and empathic understanding, were able to achieve a higher experiencing level. The trainees with whom he did not perceive himself as having a good relationship achieved a lower experiencing level, i.e., were more defensive. This fits with the earlier findings in that supervisor 1 appears to have been more sensitive to his own feelings and more empathic with his trainees.

Is the discrepancy between the supervisor's and the trainee's perceptions of the relationship related to the trainee's level of experiencing? Only in the first group was the discrepancy in perception related to the trainee's level of experiencing significant at the .01 level. This indicates that the greater the discrepancy, the lower the trainee's experiencing level; or the less the discrepancy, the higher the experiencing level. The trainees in group 1 who were less sensitive to their own experiencing were also less sensitive to the supervisor's actions; while those who were sensitive to their own experiencing were also sensitive to the supervisor.

Discussion

In general only the results for group 1 are what one would expect according to earlier research. Client-centered theory holds that when conditions are perceived as "therapeutic" by the trainee, he will allow himself to participate more deeply in intra-personal exploration, i.e., higher experiencing, less defensive. These results may simply show that non-defensive persons will accurately describe their relationships, good or bad, while defensive persons will be less accurate in describing their relationships. This may also apply to their counseling relationships.

These results do not reflect any change in experiencing. Any changes would take place over a continuing relationship, while

this study was cross-sectional at the end of only a ten-week relationship. In any case, the findings seem to warrant similar studies of supervisory relationships, particularly to investigate the change in the trainee that may be related to the level of the supervisory relationship.

The real task ahead for research is to specify further the separate types of supervisor behavior and evaluate their relevance to counselor education. This calls for several supervisors' relationships with several groups of trainees in order to isolate with some certainty the effects produced by the supervisors themselves.

Research with practicum supervision will continue to be slow because of the small numbers enrolled in each practicum. This difficulty may be overcome by several supervisors working together in cooperative research. One would hope that such research would lead to better supervisor selection, educational standards for supervisors and better supervision of counseling practicum; resulting in better prepared counselors.

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The Prediction of Effectiveness in School Counseling¹

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This study was concerned with the prediction of school counselor effectiveness before placement. Three groups of subjects varying in amount of experience were appraised independent of selection. Ratings by principals, NDEA faculty, and state supervisors were subsequently used as criteria. The most promising measures across groups and criteria were a self-appraisal of essential counselor qualities and skills; a Counselor Rating Scale, completed by the school principal; and undergraduate grade point ratio. However, it was concluded that because of the necessity for several criteria and their low interrelationships, the prospects seemed poor for precise prediction of effectiveness in school counseling.

At a time when numbers of teachers are being transformed into guidance specialists, it is pertinent to inquire whether effectiveness in the role of school counselor can be predicted before placement. By and large, expressions of opinion on the characteristics of the ideal counselor (Cox, 1945; Block, 1955; McCreary, 1957; Patterson, 1960; APGA, 1961) far exceed in quantity comparative (Cottle, 1953) and predictive studies. Some years ago successive critics in the *Review of Educational Research* (Burnett, 1954; Stoughton, 1957) regretted the lack of longitudinal research. However, recently a number of investigations on the impact of training programs and NDEA institutes have been published in which the subjects generally were practicum students at the time the criterion was applied. Although in these studies standardized measures of academic aptitude, interest and personality adjustment were rarely convincingly related to criteria, ratings of potential proficiency (Abeles, 1958) and

measures of ambiguity tolerance (Brams, 1957) seemed promising. Steffle, King, and Leafgren (1962) have demonstrated that peer ratings can be accurate when used as a concurrent criterion and that middle western NDEA enrollees preferred as their own counselors co-participants with higher academic performance, more appropriate Strong scores, and less dogmatism. With over forty unpublished studies of NDEA enrollees abstracted at APGA in 1963 (Arbuckle, 1963) knowledge about prospective school counselors is increasing rapidly, but again few of these studies employed post-training criteria.

The major purpose of the present study was to predict before placement the adequacy with which school counselors would perform their assignments. It was hoped to identify variables (if any) which were associated with successful job performance.

Procedures

Subjects

The subjects were drawn from three groups:
a) Ninety-two teachers enrolled in a School Counseling Workshop in spring, 1959. Of these 32 were placed as school counselors throughout Hawaii the following fall. Of the remaining 60, two were placed by 1961 and two by 1962. Enrollment was voluntary but was advertised as a prerequisite to placement. Although many had

¹This research was supported by the Hawaii Department of Education through the Psychological Research Center, University of Hawaii. The cooperation and encouragement of Francis Clark, Professor of Education, University of Hawaii, is gratefully acknowledged.

taken courses in guidance and counseling and reported experience in counseling, none met the minimum state requirements for certification (16 graduate semester hours in guidance).

b) Twenty-nine enrollees in an NDEA Institute, summer, 1961, conducted by the College of Education, University of Hawaii, of whom 24 entered state public school counseling positions in fall, 1961, and of whom 11 were still employed in fall, 1962. None met the minimum requirements for certification and all were employed by secondary schools in Hawaii.

c) Thirty enrollees in NDEA Institute, summer, 1962, also conducted by the College of Education, University of Hawaii, of whom 15 returned to public school counseling positions in Hawaii in fall, 1962. Subjects in the 1962 and 1961 groups who had also been participants in preceding years were reappraised if appropriate. Most of the participants were eligible for certification and had had at least one year of secondary counseling experience. (Of NDEA enrollees not considered in this research most accepted administrative jobs, took counseling positions outside of the Hawaii public schools or continued their graduate educations.)

Although these groups were not necessarily representative of secondary school counselors with limited experience throughout the country, they did include a large majority of those who have entered counseling in the state of Hawaii since 1959. Almost half (46 per cent) of all counselors in service in 1962-63 had been appraised for this research. As reported separately (Dole, 1963) the 1959 group did not differ appreciably from somewhat comparable populations (graduate students, teachers, etc.) on MAT, MTAI, Rokeach, Gordon, Strong and Vocational Sentence Blank, except for an above average social service interest. The generality of this study to other groups of school counselors seems justified with caution.

Appraisal

After the problem was discussed with a number of experts and the literature surveyed, personality characteristics salient to effective counseling were hypothesized and a variety of appraisal procedures selected to measure these characteristics. Standardized tests were supplemented with custom-built instruments.

Standardized tests used in 1959 included the Miller Analogies Test, Minnesota Teach-

er Attitude Inventory, Rokeach Dogmatism Scale, Dole Vocational Sentence Completion Blank, Strong Vocational Interest Blank, and Gordon Personal Profile. The Cottle Scale on Attitudes (1953) and a comprehensive guidance achievement test (developed at the University of Minnesota, Department of Educational Psychology) were administered to the 1961 sample, in addition to a revision of the original battery.

The custom-built instruments² in 1959 included:

Personal data form, an inventory of educational and vocational background, undergraduate grade point ratio, socioeconomic characteristics, and personal attributes.

Role play ratings by guidance specialists. Each candidate was asked to role play a prepared situation for five minutes as a client and for five minutes as a school counselor before a panel of three judges. Each judge independently completed a 13 item rating form, comparing the candidate with other teachers on a five point scale. Sample items were "personal warmth and friendliness," "understanding of student," "overall potential as counselor."

Pupil ratings. Each candidate teacher was asked to have one of his classes complete an evaluation form, ostensibly of his teaching competence, which included the following items—"How does he rate as the sort of person to whom you would send a friend who had a personal problem?" and "All things considered, how would you grade him?" The pupil ratings were unsigned, were not read by the candidates, and were mailed directly to the investigator.

Self-appraisal. The candidates were requested to identify five qualities "you believe are most essential in an effective counselor" and five skills "a good counselor should have," rate themselves on each, and describe their plans, if any, for improvement. Responses to self-appraisal were rated on a five point scale by two judges independently.

Book report. Each candidate prepared a book report before the workshop on a basic text in guidance. The book reports were graded on a five point scale by the investigator according to academic standards.

Counselor potential. The principals under whose supervision the 1959 candidates taught or counseled were asked to list up to ten adjectives describing an effective counselor and to rate the candidate as a potential counselor compared with other teachers on a five point comparative scale. An average rating was computed for each

²Copies of these custom-built instruments may be obtained from the investigator for research use.

candidate. (The adjectives suggested by more than 70 principals were later used as a basis for construction of an eight item scale which became the criterion measure.) A six item scale used in 1961 and 1962 included: personal characteristics, counselor-staff relationships, counselor-student relationships, general school services, professional growth and counselor-community relations.

Group nominations. A set of 15 statements, such as the "best in listening to students," "knows the most about guidance and counseling," and "overall will probably make the best counselor," was developed. After working in a team of 9-13 for a week, each participant was asked to nominate the persons in his group who most closely fitted the statements, to predict who would be the most popular in his group for each statement (social perceptiveness), and to predict for each statement how many group members would nominate him (insight).

Observers' ratings. A graduate student in psychology was assigned to each team as a "resource consultant." At the conclusion of the workshop each observer used the Group Nominations form to rate the members of his team.

Adjectives. The subjects were asked to list as many adjectives as they could think up in five minutes "to describe the ideal counselor."

Counselor Apperception Test. A series of seven drawings showing counselors in various situations was developed, after pretesting with graduate students not enrolled in the workshop. Subjects were requested to tell a "dramatic" story about counseling as each drawing was projected for six minutes.

Self-description. Each candidate responded to open-end questions about home life, personal adjustment, work habits, faults, health, personal objectives, etc.

Administration of Appraisal Battery

All appraisals were conducted by test administrators associated with the University of Hawaii Counseling and Testing Center.

The purposes of the appraisal were explained to the subjects. However, it was noted, especially in 1959, that a number felt threatened even though they were assured that decisions about them would not be made on the basis of their responses. In other words complete honesty by all participants in responding to inventories cannot be assumed. The results of each appraisal were identified by numbers only and were filed with the Psychological Research Center. Despite understandable interest in the outcome on the part of administrators and of the subjects, specific results have never been released (except MAT in the case of a few applicants for leadership training). Thus selection

by administrators and decision making by subjects (in choosing to accept counseling positions, for instance) were not influenced by appraisal test battery scores.

Criterion

Following some of the ideas about personality appraisal suggested by Stern, Stein, and Bloom (1956), the investigator attempted through interviews and an open-end questionnaire to elicit from school principals their conceptions of an effective counselor. Adjectives suggested by more than 70 principals in rating the 1959 workshop candidates were next classified independently by two judges, eight areas were identified and defined, and a five point comparative scale applied to each area. The average scale score was treated as the criterion measure. The eight areas were personal characteristics, teacher and staff relationships, counselor-student relationships, guidance organization and administrative skills in guidance, general school services, professional growth, and counselor-community relations. In spring 1962 the eight areas were reviewed and redefined by a State Department of Education committee of principals, supervisors, and school counselors. A full description of this scale has been prepared (Dole, 1963).

Using the Counselor Rating Scale, the ratings of three groups were treated as criteria: school principals, NDEA staff members, and state supervisors.

Operationally, the principal's opinion appeared to carry the greatest weight so far as selection, placement, transfer, and retention of school counselors was concerned. While it can be argued that many principals may have had unsatisfactory conceptions of the counselor's job, still it was a fact that these conceptions determined the occupational fate of the counselor.

The NDEA staff members whose ratings were obtained in 1961 and 1962 had worked closely with small groups of assigned enrollees for almost two months, listened to their tapes in practicum situations when enrollees counseled able high school students, and observed them in class and in informal situations. Since all were experienced in college teaching and practicum supervision, (four of the NDEA staff were prominent in guidance and counseling at the national level) they could justifiably be called academic experts.

In contrast, the two state supervisors might be considered practical experts. Their impressions of

the counselors were obtained from interviews and reports, and from comments by children, parents, teachers, and principals as they travelled about the state. Amount of gain on the comprehensive achievement test in guidance during the Institute was treated as an additional criterion for the 1961 group.

Administration of Criterion Rating Scale

After review by State Department of Education officials copies of the Counselor Rating Scale and accompanying definitions and directions were sent to the supervising principals in the spring of 1960 when the 32 counselors in the 1959 group had been on the job more than six months. The completed ratings were returned directly to the experimenter and were not made available to the state supervisors. Ratings of the 1959 group who were still counseling in Hawaii were similarly collected in spring 1961 and spring 1962. Participants in the 1961 NDEA Institute were rated by their principals in spring 1962, approximately nine months after appraisal data had been collected.

In 1961 and 1962 each NDEA staff member completed his ratings upon the group of four to eight enrollees who had been assigned to him throughout the Institute. Each year four staff members submitted ratings; two raters participated in both years.

Since the two state supervisors rated all 81 school counselors in the state during fall 1962, it was possible for them to increase their reliability by distributing their ratings normally along the five-point scale for each of the eight items. The

ratings made by each supervisor were independent of one another and of the principals and NDEA staff judgments.

Analysis of Data

Reliability of Criteria

The internal consistency of the eight item Counselor Rating Scale (corrected $r = .88$) was considered satisfactory (Table 1). Of the three criterion groups who used the Scale, the state supervisors were more reliable than the school principals, but it was not possible to collect data on interrater agreement for the NDEA staff members.

The proportion of school counselors whose performance was considered unsatisfactory by the various criterion groups ranged from 8 to 16 per cent (Dole, 1963). However, none of the counselors sampled in this investigation was considered unacceptable by more than one criterion.

Appraisal Measures vs. Criteria

Because of the low consistency of principals' ratings as a criterion and of a greater interest in predicting inadequacy rather than to a point on the principal's rating scale, a split sample and preliminary inspection approach to the data was taken.

Table 1
Reliabilities of Custom-Built Measures

Measures:	Group	N	r	Type of Reliability
Selection Battery				
Self-appraisal	1961	29	.91	Interscorer (Two counselor educators)
Counselor Potential ¹	1962	19	.92	Internal consistency (split-halves with Spearman-Brown correction)
Counselor Apperception Test	1959	16	.92	Interscorer (Two graduate assistants)
Counselor Apperception Test	1959	14	.69	Stability (Retest after 12-24 months)
Peer nominations	1959	32	.72	Internal consistency (split-halves with Spearman-Brown correction)
Criterion				
Counselor Rating Scale ¹				Internal consistency (split-halves with Spearman-Brown correction)
by school principals	1959	19	.88	Stability (Retest after 12 months, same principals)
by school principals	1959	16	.59	Interscorer (Two principals concurrently)
by school principals	1959	19	.41 ^a	Interscorer (Two state supervisors concurrently)
by state supervisors	1962	81	.88	

¹Identical methods of deriving scores were used for the Counselor Potential and Counselor Rating Scales; in 1962 the six items used for Counselor Potential were similar to six of the eight items of the Counselor Rating Scale.

^aSignificant at .10 level; all other values of r significant at .01 level.

The 32 subjects in the 1959 groups were divided at random into two subgroups. For each prescored appraisal measure, with the first subgroup of 16 a scatterplot was cast against the criterion score (principals' rating). The scoring systems of the custom-built measures, which had been designed on theoretical bases, were item analyzed, reviewed and revised. New scoring systems which seemed consistent with theory and the empirical data were then applied to both subgroups. The scoring reliability and validity of these systems were thus tested out on the second group.

By inspection of scatterplots at this point all measures which did not appear to discriminate on the criterion for both subgroups were discarded from consideration. Pearson product-moment correlations were then obtained for the 11 remaining measures (hereafter referred to as the Counselor Selection Battery) against the various criteria for all available subjects in the three counselor samples.

Results

Counselor Selection Test Battery

The measures which showed the most promise for the 1959 group against the

criterion of principal rating in the spring following appraisal were Undergraduate Grade Point Ratio, Counselor Potential, Minnesota Teacher Attitude Inventory, Sentence Blank—Achievement, Persuasive, and Neutral; Self-appraisal, Peer Nominations, and the Counselor Apperception Test. Reliabilities of the custom-built instruments (Table 1) were significant at the .01 level in all cases except one.

The measures used in the Counselor Selection Battery were also intercorrelated, for the 1959 group (ϕ). None was significantly associated with any other (Dole, 1963).

Validities

As shown in Table 2, of the measures used in the Counselor Selection Battery only Counselor Potential, that is, principal's rating before placement, held up for the 1961 group. In fact, Undergraduate Grade Point Ratio and Self-appraisal showed non-significant reversals.

In Table 3 the relation of the counselor selection battery to the averaged supervisors' Counselor Ratings is presented. It will be recalled that these ratings were considered the most reliable of the three cri-

Table 2
Relation of Counselor Selection Battery
to Principal's Rating

Counselor Selection Battery	Principal's Rating			
	1959 Sample		1961 Sample	
	N	r	N	r
Undergraduate grade point ratio	30	.45°	23	-.23
Counselor Potential	27	.44°	24	.46°
Minn. Teacher Attitude Inventory	32	.21	24	-.13
Self-appraisal	16 ^a	.35	23	-.30
Peer nominations	31	.28	23	.12
Gordon-Ascendancy	32	.28	23	.12
Emotional Stability	32	-.32+	24	-.14
Dole Vocational Sentence Blank-Achievement	32	-.20	21	.07
Persuasive	32	.20	23	.10
Neutral	32	.42°	23	.11
Counselor Apperception Test	32	-.25	23	.28
	16 ^a	.30	24	.10

+Significant at .10 level

°Significant at .05 level

^aDoes not include 16 counselors used in developing scoring system

Table 3
Relation of Counselor Selection Battery
to State Supervisors' Ratings

Counselor Selection Battery	State Supervisors' Ratings					
	1959 Sample		1961 Sample		1962 Sample	
	N	r	N	r	N	r
Undergraduate grade point ratio	11	.26	13	.26	10	.47
Counselor Potential	11	.51	13	-.19	14	.70**
Minn. Teacher Attitude Inventory	14	.43	13	.08	8	.30
Self-appraisal	13	.68**	13	.30	15	.44+
Peer nomination	14	-.07	13	.06	15	.33
Gordon-Ascendance	14	-.54*	13	-.18	a	a
Emotional Stability	14	.17	12	-.08	a	a
Dole Vocational Sentence Blank-Achievement ¹	11	-.21	13	-.02	8	.04
Persuasive ¹	11	.06	13	-.40	8	-.25
Neutral ¹	11	.41	13	-.28	8	.65+
Counselor Apperception Test	11	.18	13	.07	15	.52°

+Significant at .10 level

*Significant at .05 level

**Significant at .01 level

a not given in 1962

¹biserial

teria and that the ratings of subjects still employed as counselors were all made in 1962. For the 1959 group, more than three years after placement, Self-appraisal and Gordon-Ascendance were significantly associated with counselor effectiveness as judged by central office personnel. For the

1961 NDEA group, no parts of the battery showed a significant relationship; and for the 1962 NDEA group Counselor Potential, Self-appraisal, DVSCB Neutral and the Counselor Apperception Test were significantly associated at or beyond the 10 per cent level with ratings after three months

Table 4
Relation of Counselor Selection Battery
to NDEA Supervisors' Ratings

Counselor Selection Battery	NDEA Supervisors' Ratings			
	1961 Sample		1962 Sample	
	N	r	N	r
Counselor Selection Battery	29	-.08 ^b	22	.16
Undergraduate grade point ratio	30	-.26	22	.42°
Counselor Potential	29	-.20	18	-.37
Minn. Teacher Attitude Inventory	29	.34+	30	.28
Self-appraisal	29	.26	30	-.01
Peer nomination	26	.13	a	a
Gordon-Ascendance	26	.05	a	a
Emotional Stability	29	-.03	18	-.07
Dole Vocational Sentence Blank-Achievement	29	.01	18	-.17
Persuasive	29	.03	18	.59**
Neutral	13	.07	30	-.04
Counselor Apperception Test				

+Significant at .10 level

°Significant at .05 level

**Significant at .01 level

a not given in 1962

^bwhen tabulation collapsed to four cells, $\chi^2 = 2.68+$ and $\phi = .30$

Table 5
Interrelationships between Criteria of
Counseling Effectiveness

Criterion	1959 Sample		1961 Sample		1961 Sample		1961 Sample		1962 Sample	
	State Supervisor		NDEA		State Supervisor		Achievement		State Supervisor	
	N	r	N	r	N	r	N	r	N	r
Principal's ratings	15	.34	24	.02	12	-.14	24	.01		
NDEA staff					13	.37	30	-.02	15	.27
State supervisors							13	.29		

of counseling experience. All measures in 1962, except DVSCB—Achievement, were correlated in the same direction as was the 1959 group against the criterion of Principal's Rating.

The third criterion used in this study was the rating of NDEA staff obtained immediately after the summer NDEA Institutes in 1961 and 1962. Only Self-appraisal of the measures applied to the 1961 group (Table 4) was significantly associated with this criterion; Counselor Potential and DVSCB—Neutral were significantly correlated with ratings of the 1962 group.³

Interrelation between Criteria

No significant interrelationship (Table 5) was established between any of the three criteria: Counselor Ratings completed upon the various counselor candidate groups by principals after placement, NDEA staff after Institute participation, and State Supervisors from 4 to 40 months after placement. A measure of cognitive effectiveness, change on the Comprehensive Achievement Test in Guidance after attending the 1961 NDEA Institute, was also unrelated to the three criteria. (The sample was also fractionated into high and low initial Comprehensive scores, but no relationship with any criterion was found.)

³For administrative reasons a number of additional measures were used in 1961 or 1962. MAT, SVIB, MMPI, Cottle's measure of attitudes and a Comprehensive Achievement Test in Guidance were unrelated to the criteria. However, a rating of emotional adjustment by two of the NDEA staff after the Institute correlated significantly with state supervisors' rating ($\rho = .66$) for 15 counselors in the 1962 group. Clinical judgment may have promise (cf. Bandura, 1956).

Discussion

Predictors of Counseling Effectiveness

The most promising predictors identified in these studies, predictors which were related to more than one criterion, were Self-appraisal, Counselor Potential, and Undergraduate Grade Point Ratio. Two of these predictors, college grades and the Counselor Potential ratings were, in effect, derived from past performance in complex situations over substantial periods of time. They could be said to summarize roughly the perceived quality of thousands of acts by each individual. As a possible source of contamination, evidence about academic performance and professional reputation might have been available to the criterion groups. Analysis of the Self-appraisal task suggests that effective counselors were able to distinguish appropriately between qualities and skills, to select professionally relevant answers, to look at themselves honestly, and to present intelligent plans for professional growth. The potentially good counselors seemed to have an accurate perception of counselor role *before* training was completed.

For the most part it was found that the remaining measures in the Counselor Selection Battery were not *consistently* related to the various criteria. In fact, excluding the 1959 group, only 8 of 53 correlations were significant at the .10 level. A majority of these significant correlations might have occurred by chance! There was a tendency for the state supervisors to rate more highly those who had been good students in college or who answered like successful teachers on the Minnesota Teacher Attitude In-

ventory and for the NDEA staff to rate them less highly.

There seemed to be little guarantee that counselors who were perceived by their peers as potentially effective would be similarly perceived by those on a supervisory level whether by academic or practical guidance experts or by school administrators. Recalling that in the 1959 group ratings by pupils and graduate student observers, as well as by state supervisors were similarly unrelated to principals' ratings after placement, the outlines of the counselor's dilemma appear (Dole, 1960). He can't please everyone! Acceptance by one group, whether by pupils, peers, professors or principals, may be counterbalanced by the rejection or indifference of another. Had we measured parents' and teachers' opinions of our subjects, we suspect that these groups also would have differed in their evaluations.

On the Gordon Scale of Ascendance counselor candidates in 1959 who less frequently endorsed statements of dominance and initiative in the group situation were rated high as school counselors one year later by their principals and three years later by their state supervisors. However, since for the 1961 group a significant relationship was not established between Ascendance and any of the three criteria, generalizations cannot be made with any confidence.

Like many previous studies of social service occupations in which measures of self-reported adjustment have been used, Gordon's Emotional Stability (absence of neurotic symptoms) was not significantly associated with any of the criteria of rated effectiveness for any group. In other words, sensible though it may appear, the case for radiant mental health in school counselors has yet to be made on the basis of standardized tests.

Among measures of the DVSCB three had held up for the 1959 group against Principal's Rating after Placement, but in the 1961 group there were no clearcut relationships with Principal's Rating. Concern with Achievement and an interest in Per-

suasive activities were also unrelated to State Supervisors' Ratings and NDEA staff ratings. In 1962 the group NDEA enrollees who had written more guarded, neutral phrases rather than commit themselves positively or negatively about their interests received higher ratings. One speculative explanation for this finding is that the more professional appearing counselors limited their expressed interest commitments outside of social service areas.

Score on the Counselor Apperception Test was associated with high rating by state supervisors for a small sample from the 1962 NDEA group. The more effective counselors in their stories showed more empathy for pupils, more professional identification, described more positive relations with peers and principals, referred more frequently to tools and materials of guidance, and used more rational, guidance-oriented plots.

The Less Effective Measures

Many of the appraisal instruments used in this research did not survive the inspection and cross-validation procedure which was applied to the 1959 group. It is entirely possible that some of these variables might have shown a significant relationship if contingencies and selection procedures could have been closely controlled, if more criteria of greater reliability and a larger or more representative experimental population had been available; on the other hand it may well be that these characteristics were themselves unreliable or even that the attributes in question simply did not contribute to whatever it was that determined the principals' ratings. Whatever the explanation, no support was given the following in counselor selection, if principal's rating is accepted as a proper criterion:

Ratings of role playing, pupil ratings, general ability (MAT), insight, empathy, openmindedness (MAT), insight, empathy and sociability (Gordon), (Rokeach), responsibility and sociability (Gordon), personal problems (Dole VSCB), interest in others (Dole VSCB), interest patterns (SVIB), ratings of mental health based on self-descriptions, personal attributes such as age and sex, and professional and educational experience, as for example guidance assignment in preceding year and credits earned toward counselor certification.

Implications

When professional counselors have occasion to discuss school counseling as a possible occupation, they can make some modest guesses for those clients who have been school teachers. On the other hand, the polite hint by the counselor educator to the graduate student to find some other specialization because of inventory scores, practicum performance, or a superficial judgment of "maladjustment" seems fraught with potential unfairness, but the unbiased opinion of a psychologist who had known the candidate for several months might be worth considering.

Those who educate or supervise counselors may find it difficult to accept the full meaning of their own unreliability. When by and large there is so little agreement about who is an effective counselor, confidence in current instructional and administrative procedures and policies is threatened.

In a broader perspective, this research is consistent with longitudinal studies of clinical psychologists (Kelly & Fiske, 1951; Kelly & Goldberg, 1959) and psychiatrists (Holt & Luborsky, 1958) in suggesting the very modest predictive efficiency of standardized tests, especially personality measures. The approach of Stein, Stern and Bloom (1956) seems potentially fruitful. Following an intensive study of the criterion and formulation of hypotheses, measuring instruments are selected or custom-built. Replication is essential. However, where small numbers of candidates are involved, the utility of expensive selection procedures must be considered (Cronbach & Gleser, 1957). The most economic device may be a comparative rating obtained from a number of observers who have had a variety of experiences with the candidates similar to those involved in the criterion.

In the selection and placement of school counselors, if it is assumed that satisfaction of the principal is a major criterion of effectiveness, the practice of having principals nominate teachers for professional training in guidance is supported by this research. If approval by state supervisors

or counselor educators is a criterion, application of validated parts of the Counselor Selection Battery might be helpful. So long as the criterion is based on human opinion rather than some objective product and so long as so many persons may legitimately pass on the work of the school counselor the prospects for developing a highly predictive selection battery for all criteria seem slender indeed.

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Comment

Dole has obviously done a careful and well-documented study on the problem of predicting counselor effectiveness. Again we have an illustration of the enormous complexity of the problem and the inadequacy of any existing tools or techniques. A hopeful suggestion does emerge, however, from Dole's findings and review of the literature. He suggests that the simplest and most efficient "device may be a comparative rating obtained from a number of observers who have had a variety of experiences with the candidates similar to those involved in the criterion." It is to be hoped that Dole will pursue this possibility further.

Notice that this plan depends upon a "comparative rating obtained from a number of observers." If the principal's rating is to remain as the final criterion measure then it would seem logical that a comparative rating from a number of observers was foredoomed to failure as a predictive instrument unless the observers were all principals similar to the one doing the final rating.

As Dole points out, one of the major difficulties rests with determining what the criterion ought to be. He argues, on practical grounds, that we have to use the principal's ratings since he determines the initial hiring and continued employment of the counselor. But there is a danger that this will result in the selection and continuing employment of the "administrative assistant" type of person rather than one who is truly committed to counseling. How to resolve the dilemma?

Perhaps one solution lies in informing counselor candidates during their training periods of the discrepancy which may exist between a principal's expectations and demands and the conception of his role held by a counselor. The training program would then include a presentation and discussion of ways and means of changing the perception of one's role held by others, especially a principal. It is conceivable that internship experience could include opportunities for the apprentice counselor to demonstrate his capacity to change perceptions of his role held by others. This would mean, of course, an added dimension to the supervisor's task.

Another solution might lie in having the authority and responsibility for selecting counselors and approving their continued employment shared between the principal and a specialist in counseling. The latter could be the local director of guidance or a state supervisor of counseling. It is common practice for responsibility in hiring subject matter teachers to be shared with department heads. Why not for counselors? Actually there are places where this is currently being done.

The danger rests, of course, with having the principal as the sole judge for selecting and subsequent appraisal. It makes no sense to develop a technically brilliant predictive instrument for the wrong or inadequate criterion. There are many practical realities, as Dole points out, which tempt one to use the principal's judgment, but this is a temptation which should be resisted unless the principal's judgment

constitutes only a part of the criterion measure.

Policy statements are currently being issued on the role and function of the school counselor by the American School Counselors Association and on counselor preparation by the Association for Counselor Education and Supervision. Undoubtedly these statements will have considerable impact upon selection of counselor candidates and their training. But how many principals and superintendents will read or be influenced by them? Until and unless these associations, state and local supervisors of

guidance and counseling, and school counselors can influence school administrators, researchers like Dole face almost insurmountable difficulties. Certainly Dole is to be commended for his pioneering efforts in trying to solve the methodological problems involved. His procedures and suggestions should prove to be very useful once a consensus can be reached on the more basic questions of role and function.

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Criteria for Rehabilitation Counselor Performance in State Vocational Rehabilitation Agencies^{1, 2}

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This study examined the relationship of eight performance measures and a measure of job satisfaction when these were applied to 143 rehabilitation counselors in six states. A cluster analysis of the intercorrelations showed two clusters which included three variables each. The clusters were labeled "Case Management" and "Performance Rating." Two of the performance variables and the job satisfaction score did not contribute to either cluster. The implications of these findings for state vocational rehabilitation agency practice and for further research were briefly considered.

This study examines the relationships among rehabilitation counselor performance criteria currently being used or readily available to state vocational rehabilitation agencies. Inspection and cluster analysis will be used to suggest unities among these criteria.

The evaluation of counselors, whether they are working in rehabilitation, school and college, or other settings, has been a source of concern to investigators not only in rehabilitation but also in other counseling settings. Numerous criteria have been developed to assess counseling effectiveness of the counselor's performance. In the field of vocational rehabilitation counseling, work toward the establishment of client work satisfactoriness and satisfaction criteria has been undertaken by Scott, Dawis, England and Lofquist and their colleagues (1960). Their studies have focused on the client while studies at Iowa

by Jaques (1959) and by Muthard and Miller (1963) have been directed toward developing instruments that will measure counselor performance and assessing the effectiveness of such instruments.

Although criteria of counselor performance in any setting must ultimately be gauged by their association with favorable client outcomes, we think that it is desirable and necessary to move ahead in the development of counselor performance measures for a number of reasons. For example, although client satisfactoriness and satisfaction are critical measures they are also, by their very nature, difficult and expensive to secure on a continuing basis. Both because of cost and feasibility, it will be necessary to develop counselor measures which are indicative of effective work with clients. Staff development and evaluation cannot wait for the feedback of data which are both difficult and expensive to obtain. There is a need for more immediate criteria; when ultimate criteria have been formulated the more immediate indices can be studied in relation to them.

Research on rehabilitation counselor performance criteria is also needed to provide a basis for differential staff development training programs. If supervisors in rehabilitation agencies are to assume teach-

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²The authors wish to thank the staff of the six state general vocational rehabilitation agencies (Connecticut, Iowa, Minnesota, Missouri, North Carolina and Oklahoma) who made this study possible.

er-consultant roles in their relationships with their staff, it will be necessary, if they wish to give direction to this role, for them to make analytic studies of the work of their counselors. Similarly, the programs of continuing professional education sponsored by many state agencies can better meet the needs of counselors if procedures for the assessment of counselor strength and weaknesses are available. This study will examine criteria developed as a result of translating existing conceptions regarding counselor performance into quantifiable measures.

The 143 counselors studied here came from agencies in six states: Connecticut, Iowa, Minnesota, Missouri, North Carolina and Oklahoma. All the agencies selected were middle-sized general vocational rehabilitation agencies. As can be seen, some geographic representation was obtained, but both accessibility and willingness to cooperate in the study were considerations in selecting the states. To be included in the study, a counselor must have been employed at least one full year during the three year period studied so that closure and caseload data would be available. Since Co-Worker Ratings require at least two co-worker ratings to be an effective instrument, we also limited our sample to counselors who worked in a co-worker relationship with two other counselors and a supervisor.

Instruments

The following performance measures and rating procedures were used:

1. **The Co-Worker Rating Blank:** This blank which incorporates six evaluation dimensions and an over-all judgment was developed specifically for this study.³ It has an eight-step scale and it was used by both co-workers and supervisors to assess the counselor performance against what they thought was the ideal for each statement. While only ratings on over-all performance were used, the rater was asked to consider more specific items pri-

marily to assure careful and thorough evaluation.

2. **Supervisor Ratings:** Supervisors used the same blank as the co-workers in making their ratings.

3. **Present State Rating:** This label includes the present rating schemes used in four of the six state agencies and the global efficiency ratings made by at least two administrators in two other states, which, at the time of the study, did not have a systematic quantifiable procedure for evaluating counselors.

4. **Job Satisfaction Inventory:** A Job Satisfaction Inventory⁴ constructed by Johnson (1955) was modified to obtain more variability of response and eliminate non-discriminating items. The inventory used has items which cover eight aspects of the counselors' work: 1) physical and mental exertion, 2) relations with associates, 3) relations with employer, 4) security, advancement and finances, 5) interest, liking for, an emotional involvement in job, 6) job information, training and status, 7) physical surroundings and work conditions, 8) future goals and progress, evaluation and retrospect. Since the focus of this paper was on performance criteria, only the total score on the Job Satisfaction Inventory was used.

5. **Average caseload:** The counselor caseload is obtained by taking all of the people a counselor was working with when the fiscal year began plus all of the people accepted by him for rehabilitation services in that year. This index was secured by averaging caseload number for the fiscal years 1960, 1961 and 1962.

6. **Average number of closures:** Closures are administrative decisions to terminate services to a client and remove him from the active file of his counselor. The same three year period from July 1, 1959 through June 30, 1962 was used to determine the mean number of closures in each category.

a) 12 closures—the number of clients given services and rehabilitated; i.e., entered employment.

³Copies are available from the authors upon request.

⁴Copies are available from the authors upon request.

- b) 13 closures—those clients to whom services were given but who were not judged rehabilitated.
- c) 15 closures—those clients who were accepted for services, but were interrupted before substantial services were given or the client became employable.

7. Caseload velocity index: This criterion measures the rapidity with which the counselor develops plans for action with the client or provides rehabilitation services. To derive it, random samples of ten "12" closures and ten "13" closures for the 1960-61 year were taken for each counselor. Each case in the sample was checked to see how long, by months, it had previously been in Status 1; i.e., eligible for services but not yet receiving other than evaluative or counseling services. A mean length of time score was used as the index since some counselors did not close at least ten cases in these categories. Time in Status 1 was taken as a best index of case movement since factors which influence movement are most directly under the counselor's control during this stage.

With the exception of co-worker and supervisor ratings, the above data were available from the administrative files of each of the state agencies. Where the efficiency rating form devised by us needed to be used to secure a global judgment of the counselors by the state staff, this was done by submitting it to the state office staff responsible for case service activity. In the case of the Co-Worker Ratings and the Supervisor Ratings based on the Co-Worker Rating sheet, these were administered to large groups of counselors in the state and by distribution to district offices. Precautions were taken so that the Co-Worker Ratings would be confidential and would not be seen by district or state staff.

Reliability

In two instances where efficiency ratings were secured, a reliability coefficient of .85 was obtained for the average ratings. Average ratings on the Co-Worker Rating

scheme yielded a reliability coefficient of .76 for averages analyzed by analysis of variance procedures (Ebel, 1951). The reliability coefficient for supervisor ratings was .43. Since we had each supervisor rating different counselors, the reliability of supervisor ratings were estimated from what the counselor ratings would be if treated individually rather than as mean scores. The Job Satisfaction Inventory yielded a split-half reliability coefficient of .88.

Results

After inspection for linearity—through the use of scatter-plots—the eight variables of Table 1 were intercorrelated using the Pearson Product Moment Index. Since one of the measures used in our study, the Job Satisfaction Inventory, did not correlate significantly with any other variables, we are including it in Table 1, but did not include it in the cluster analysis.

General analysis of intercorrelations: From Table 1 we can see that there is only a limited degree of association among the criteria studied. Even the highest correlation, that between Size of Caseload and Number of 12 Closures, reflects only 36% common variance. An analysis of the average intercorrelation of each variable with all others also showed that Caseload, which had the highest average, correlated .28 with the others and thus accounts, on the average, for only eight per cent of the variance. To some extent the discussion of our content analysis will also bring out the large amount of specific variance and error (i.e., unreliability) variance associated with each index. Total Job Satisfaction scores did not correlate significantly with any of the performance criteria.

Cluster analysis: Cluster analysis (Tyron, 1939) has an objective similar to factor analysis—the more parsimonious description of a larger group of variables. Although it is relatively less precise mathematically and does not give altogether the same information as factor analysis, it does serve the objective of parsimony fairly ade-

Table 1
The Intercorrelations of Nine Measures of Rehabilitation
Counselor Performance in State Vocational Rehabilitation Agencies
Pearson Product Moments Correlations
N = 143

	Case Veloc- ity	Present State Rating	Case- load	Super- visor Ratings	No. of 12 Closures	No. of 13 Closures	No. of 15 Closures	Job Satis- faction
Co-worker Ratings	.131	.247**	-.031	.324**	.060	-.014	-.090	.035
Case Velocity		.079	-.195*	.142	.042	.029	.183*	.001
Present State Rating			.304**	.419**	.370**	.206*	.193*	.103
Caseload				.179*	.597**	.120	.475**	.130
Supervisor Ratings					.226**	.044	.108	.068
No. of 12 Closures						.205*	.361**	.033
No. of 13 Closures							.266**	-.042
No. of 15 Closures								-.003

**Significant at .01 level
*Significant at .05 level

quately. In addition, it is simpler to do and understand than factor analysis.

In Table 2, we note that two clusters of three variables each were formed; the average intra-cluster correlations were .48 and .33 while the average intercorrelation of each cluster with all other variables was .13. The first cluster obtained might well be called "Case Management" since it includes Size of Caseload, Number of 12 Closures, and Number of 15 Closures.

The second cluster might be called "Performance Rating" since it includes the three rating indices of our study. As we can see, neither Case Velocity nor Number of 13 Closures clustered with the "Case Management" cluster although they both correlated to a slight degree with two of the variables of the cluster. They did not contribute to the "Performance Rating" cluster nor were they correlated with any of the variables of that cluster.

Table 2
Cluster Analysis Findings for
Measures of Rehabilitation Counselor Performance

Groups	Average Correlation Within Group	Average Correlation Between Group and Others	B Weight
I Size of Caseload No. of 12 closures No. of 15 closures	.477*	.129	3.69
II Co-Worker Rating Present Rating Supervisor Rating	.330*	.127	2.59

*Sig. at .01 level

It appears that "Case Management" items make a more unique or pure cluster than do items of the "Performance Rating" cluster. The B (Belonging) weight for the "Case Management" cluster indicates an average within cluster correlation which is over $3\frac{1}{2}$ times larger than the average correlation between this cluster and other variables. For the "Performance Rating" cluster, it is about $2\frac{1}{2}$ times larger than the average correlation with other variables.

Table 3

Average Intercorrelations of each Variable with the Two Clusters as well as with the other Variables

Variables	Group I (4, 6, 8)	Group II (1, 3, 5)	All Others
1) Co-Worker Ratings	-.02	.30**	.13
2) Case Velocity	.01	.12	.11
3) Present State Rating	.29**	.36**	.25**
4) Caseload	.56**	.15	.28**
5) Supervisor Rating	.17*	.39**	.21*
6) No. of 12 Closures	.52**	.22**	.27**
7) No. of 13 Closures	.20*	.08	.12
8) No. of 15 Closures	.44**	.13	.24**

*Significant at .05 level

**Significant at .01 level

The average correlation of each variable with the two clusters and with all other variables is presented in Table 3. From it we can see that Present State Rating procedures, Supervisors Ratings and Number of 12 Closures have significant average intercorrelations with both clusters as well as with all other variables.

Discussion

Although our analysis of eight indices showed two clusters, it also indicated that these variables include a substantial amount of specificity and error. Coupled with the fact that these measures are all immediate criteria, our findings suggest the

need for further study of rehabilitation counselor performance criteria. It also indicates that whenever single criteria are used to evaluate counselors, they are unlikely to account for substantial aspects of the counselor's performance.

Present Rating procedures and Supervisors Ratings correlate significantly with Number of 12 Closures; in addition, Present Ratings correlate significantly with Caseload Size, and Number of both 13 and 15 Closures. Speculatively, we could interpret these relationships as showing that administrators and supervisors evaluate a counselor's performance, in part, on his caseload size and closure rate. A study of different design than this one would be needed to test this hypothesis.

Within the Performance Rating cluster, we can see that Co-Worker Rating is the only member of that cluster which is independent of both "Case Management" and non-cluster variables. Since the supervisors used the same rating scheme as did the co-workers, there is some reason to attribute this difference to differing frames of reference. Because of its uniqueness and because it has, in other studies of complex jobs such as teachers and army officers (Remmers, 1963; Wherry, 1949), been found to be an outstanding criteria, Co-Worker Ratings probably deserve both further study and use in rehabilitation counselor performance. However, because of the difficulties inherent in the use of "buddy" ratings for staff development they may be of greater value in research on training and selection.

Even though the job satisfaction measure lacked correlation with other measures used, it merits further consideration by both agencies and research workers. Satisfaction may be related to such important considerations as attracting and keeping trained and experienced personnel. In research on selection and training it may also have value since it examines an important aspect of the job from the counselor's point of view. There is also a possibility that satisfaction may be associated with ultimate criteria.

Keeping in mind the limitations suggested above, it seems that state vocational rehabilitation agencies wishing to introduce new or modify existing systematic counselor evaluation schemes should consider developing one performance rating and use it in conjunction with a composite score on 12 and 15 closures. Such procedures would seem to be the most efficient approach (i.e. require the least work to secure and still yield a useful description of the counselors) within the current pattern of evaluation. They would still not account for substantial portions of the counselor's performance. As other variables, especially measures of client satisfactoriness and satisfaction, are studied in relation to these and additional measures of counselor performance, agencies should be ready to change their assessment procedures in accord with the new findings.

We should also remember that the measures studied do not incorporate information which can be used for what is probably the most important function of performance evaluation, staff development. Evaluation procedures which will enable supervisory staff to aid counselors in the continued professional development need to be developed and tested. One example of such an instrument is a Structured Case-Review Blank, a systematic rating scheme to be applied to a sampling of counselor's case records, which is being studied by the junior author.

We would like to summarize some of the limitations of this study. Since this

is a study of immediate criteria, there remains the need for examining the relationship these variables have with more "ultimate" criteria, e.g. client outcomes. In addition, this study was conducted within six states and limited to general vocational rehabilitation agencies. Its findings may not generalize to other settings or states; in fact, we found some variations when we made a state-by-state analysis of the data of our study.

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Expressed Self-Acceptance and Interspousal Needs: A Basis for Mate Selection¹

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Mate selection studies reveal inconsistent findings. It was speculated that high self-accepting (SA) individuals are attracted to persons like themselves (homogamy), whereas low SA persons indicate the reverse (complementarity). Data from 75 recently married couples and a correlational approach gave the following results: (a) mates in high SA couples were similar in dominance (p .05), nurturance (p .01) and succorance (p .05); (b) mates in low SA couples were complementary in dominance (p .05), dominance and deference (p .05), nurturance (p .01) and nurturance and succorance (p .01); (c) the highest degree of relationship between spouses was on nurturance and succorance for both high and low SA couples; and (d) the difference in SA mean scores for persons in high SA couples was significant at .0001 level of confidence, whereas a comparable difference in low SA couples was negligible. Results are discussed in relation to marriage counseling.

An aura of mystery surrounds the specific interpersonal choice of a marriage partner. Sociologists have given considerable attention in turning scientific inquiry to the ancient institution of marriage. The evidence suggests that the process of mate selection is largely homogamous in that persons with similar backgrounds (Hollingshead, 1950), religious affiliations (Kennedy, 1944; Thomas, 1951), educational (Landis and Day, 1945) and occupational levels (Centers, 1949), and environmental proximity (Bossard, 1932) tend to choose each other as marital partners. However, many of these studies were conducted prior to 1950 and in view of the social and physical mobility of the population today, as merely two facets of change, it could be surmised that because a given individual may be exposed to others whose backgrounds are diverse, "personality appears to be perhaps the single most im-

portant factor in selecting a mate" (Burgess and Wallin, 1953, p. 115).

Pertinent psychological literature reveals both a dearth of empirical research and a lack of consistent findings. Burgess and Wallin (1944) found that individuals who select each other as mates tend to be similar in personality structure. The complementary needs or "opposites attract" school also has been emphasized (Winch, 1958), the data for the latter having been obtained through the use of "need interviews" and the TAT administered to 25 married couples. Bowerman and Day (1958) studied 60 courtships, correlated male and female scores as derived from the Edwards Personal Preference Schedule (EPPS) needs, and found no evidence to support Winch's conclusions. This discrepancy stimulated another project (Schellenberg, 1959), the results of which were similar to those of Bowerman and Day.

It becomes apparent that the mate selection process is seemingly a more complex phenomenon than most theorists and re-

¹This paper is based on a Ph.D. thesis submitted to Michigan State University, under the direction of William W. Farquhar.

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searchers heretofore have indicated. The process has been studied also from the viewpoint of the development of a relationship with an emphasis upon identity problems as playing a significant part in ultimate choice of partner (Bolton, 1959). Additional evidence of complexity is offered by Martinson (1955, 1959) who found that persons who marry tend to indicate greater feelings of "ego deficiency" than do those who remain single. With particular reference to the need-complementarity dilemma, Rosow (1957) suggested a fuller consideration should be given to the distinction between latent versus manifest needs. Accordingly, he posits an intervening variable, self-acceptance, which is assumed to provide an indication of the individual's adjustment to his basic need structure. Although in a different context, support of this notion is fostered by Colvin (1957) who found that "opposites attract" when self-acceptance is lacking and that "birds of a feather flock together" when self-acceptance is present.

It has been suggested that we fall in love with those whom we need to complete ourselves emotionally (Ohmann, 1942). Freud (1925) noted that there is a tendency for narcissistic and anacletic persons to mate. This theme has been emphasized and expanded by contemporary writers who provide a global analysis relative to a variety of marriage relationships (Eisenstein, 1956). However, complementation need not be limited to attraction based upon neurotic needs and goals.

The Rogersian (1947) formulation of the relation of self-acceptance to adjustment as well as the nature of one's interpersonal relationships has been strongly supported (Roberts, 1952; Sheerer, 1949; McIntyre, 1952; Stock, 1949; Berger, 1951). Accordingly, in the present study it was assumed that the self-accepting individual would indicate greater variability in making a distinctly interpersonal choice. Further, the element of self-acceptance was used as a form of qualification of need structure with the postulate that an individual who is more accepting of self will not seek to derive a completion of self from external

sources, viz., the mate, to the extent that an individual will who is lower in degree of self-acceptance. The dominance-submissive and nurturance-receptive dimensions of interspousal behavior were chosen to represent need structure in view of both their importance as stressed by interpersonal theorists (Leary, 1957) and relative empirical support (Winch, 1958). Consideration was given also to the latter's construct of type I and type II complementarity. The former refers to mates whose need patterns are the same but different in intensity whereas the latter implies the existence of different needs.

There are two major hypotheses in this study:

- I Those mates who compose high self-acceptance couples are similar in their respective need structures.
- II Those mates who compose low self-acceptance couples are complementary in their respective need structures.

Major hypotheses I and II include five and eight subsidiary hypotheses respectively, these specifying the direction of the correlations as derived from scores on different need variables.

Method

Instruments and Design

The independent variables of the study were high and low expressed self-acceptance. The instrument for measuring these variables was the Index of Adjustment and Values (IAV) which is purported to provide a direct measure of self-acceptance (Bills, 1958). This instrument was selected specifically to avoid the difficulties inherent in self and ideal self discrepancies (Wylie, 1961). The dependent variable was interspousal need structure which is simply the product-moment correlation between a variety of pairs of needs as manifested by marital pairs. The Edwards Personal Preference Schedule (EPPS) was used for the measurement of needs as this study was considered an extension of Winch's hypotheses. Schellenberg (1959) concluded that the EPPS and Winch's instruments tended to measure the same phenomena. A Background Information Ques-

tionnaire was designed by the researcher with the expressed purpose of eliciting pertinent information about the subjects.

The theory relating to self-acceptance provides no stipulation about dyadic relationships and is essentially a singular based one. In addition, the present study dealt only with extremes of the range of self-acceptance, as existing theory did not generate suitable hypotheses for persons or couples of "average" self-acceptance. Thus, a specific procedure was used and was adapted from the resolution of a similar problem in the selection of under- and over-achievers (Farquhar, undated). The process that follows is comparable to excluding those persons (in previous designs found to be 12 per cent of the sample) whose scores lie beyond a standard error of estimate of the regression line in both directions. Discrepancy scores were obtained by subtracting the female's from the male's score on the IAV (self-acceptance test). The male's score was arbitrarily chosen as a base. The reverse would have provided the same result, yet with an opposite sign. Couples were then ranked according to discrepancy scores from positive high through zero to negative high discrepancy. Twelve per cent of the couples who composed the two extremes were then omitted for hypothesis testing. The male's IAV score was comparable to that of his spouse in couples wherein a lower degree of self-acceptance was expressed. Because the latter couples were readily distinguishable from their high self-acceptance counterparts, the males' IAV scores served as a basis for ranking degree of couple self-acceptance. Consequently, those couples previously not omitted were then ranked in the manner described and a split was made at the median of this distribution. Couples falling above and below the median were operationally defined as high and low self-acceptance couples respectively. The combined null hypotheses were: there is no relationship between respective need structures of those mates who compose either high or low self-acceptance couples. A $p .05$ was necessary for rejection of the null hypotheses.

Sample Selection Procedures and Characteristics

Persons of foreign birth who would presumably select a mate outside of the traditional western society framework, engaged or "going steady" couples wherein no guarantee of culmination in marriage exists, and couples whose marriages are too removed from the actual time of marriage, all provide sources of extraneous variance in mate choice research. Additional sources are non "free choice" marriages, with specific reference to pregnancy occurring out-of-wedlock, and marriages where there is a child who decidedly would alter the interpersonal relationship between husband and wife.

After control of extraneous variables was achieved through the initial screening of married couples who resided in housing facilities provided by Michigan State University, 210 were randomly selected for research purposes. It was determined that within this group 54 couples were married more than one year (maximum length considered), and 14 couples had a child although married less than one year, providing a restricted sample of 142. Twenty-three couples refused to cooperate and there remained 119 of the 142 couples who met the restrictions placed on the sample (83.3 per cent). However, 17 more couples were omitted because of a combination of acknowledgement of pregnancy prior to marriage, incomplete profiles and consistency variable scores of less than 9 on the EPPS. In addition, by removal of the couples highly discrepant in self-acceptance at both extremes, there remained 75 couples, 38 and 37 of which were operationally defined as high and low self-acceptance couples respectively. The range of the IAV scores for the 75 males was from 155 to 227, median 185.33, mean 185.70 and standard deviation of 17.35. Female scores ranged from 134 to 218, median 181.70, mean 183.03 and standard deviation of 16.97.

The subjects' mean ages were 23.15 for males and 21.33 for females. Wide variation in religious affiliation was found. The couples met under a variety of circumstances and the length of courtship ranged from

one to 84 months. The mean length in months for courtship, engagement and marriage was 21.25, 7.25 and 7.67 respectively. A few couples entered marriage shortly after their first meeting whereas most of the couples consisted of persons who knew each other for as much as almost two years. Generally, the overall tendency was toward homogamy of sociological variables and characteristics.

Results

Relative to Hypothesis I, all the interspousal correlations were in the predicted direction. Furthermore, three of the five correlations were statistically significant. These results are found in Table 1. Thus, it appeared that although mates who composed high self-acceptance couples tended to be generally similar in their respective need structures, the evidence was not conclusive to this effect.

Support for Hypothesis II was more pronounced as not only were all the interspousal correlations in the predicted direction but also six of the eight correlations were statistically significant. (See Table 2.)

Both type I complementariness hypotheses were supported, indicating difference in intensity on similar needs. Four of the six type II complementariness hypotheses were supported, indicating the existence of different needs. Thus, it appeared that mates who composed low self-acceptance couples were complementary in their respective need structures.

Secondary analysis of the data provided findings of added interest. When the male and female scores on the IAV were compared according to respective sample sizes, not only is there a difference between mean scores in the initial sample ($p .05$), but also there is a corresponding difference in the mean scores of mates who composed high self-acceptance couples ($p .0001$). In contrast, the most negligible difference between male and female mean scores was found between those persons who composed low self-acceptance couples. The inferred mutual attraction between low self-acceptance persons was not evidenced in high self-acceptance couples. A tentative indication was that high self-acceptance individuals made person choices on an in-

Table 1
Interspousal Correlations for Various Sub-Scales on the Edwards
Personal Preference Schedule for High Self-Acceptance Couples

Variables correlated	Predicted direction	r
male dominance-female dominance	+	+.323°
male abasement-female abasement	+	+.293
male deference-female deference	+	+.301
male nurturance-female nurturance	+	+.459**
male succorance-female succorance	+	+.325°

°Significant at .05 level

**Significant at .01 level

Table 2
Interspousal Correlations for Various Sub-Scales on the Edwards
Personal Preference Schedule for Low Self-Acceptance Couples

Variables correlated	Predicted direction	r
male dominance-female dominance	-	-.330°
male dominance-female abasement	+	+.318
male abasement-female dominance	+	+.312
male deference-female dominance	+	+.338°
male dominance-female deference	+	+.327°
male nurturance-female nurturance	-	-.501**
male nurturance-female succorance	+	+.453**
male succorance-female nurturance	+	+.512**

°Significant at .05 level

**Significant at .01 level

consistent basis in contrast to their low self-acceptance counterparts. The question of interaction patterns of the latter in terms of possible, if not probable, neurotic components is an open one.

Discussion

The findings of this study must necessarily be considered tentative, if only because of its two most basic limitations. First, although the initial sample selection occurred on a random basis, several factors reduced random possibilities and subsequent implications including a variety of efforts to control contaminating variables, delineation of sub-samples according to design and the final provision of data. Second, cross validation to date has not been accomplished. Therefore, generalization of findings is currently impossible.

Tentative Conclusions

Those mates who composed high self-acceptance couples were generally similar in their respective need structures. The similarity was most apparent when the needs dominance, nurturance and succorance were considered. Those mates who composed low self-acceptance couples were complementary in their respective need structures and specifically when spouses' scores were correlated on the needs dominance, dominance and deference, nurturance, and nurturance and succorance. When the same need was compared for both husband and wife in the low self-acceptance group, a variation in intensity was found such that when one spouse had a high need, the other had a low one and vice versa. Different needs as expressed by spouses also complemented each other.

The highest degree of relationship between needs as expressed by husbands and wives in both high and low self-acceptance couples was manifested by the needs nurturance and succorance. The nurturant-receptive dimension may then be more important than the others in the understanding of interspousal need structure. In addition, both the present data and logical deduction indicate that the traditional interpretation of complementarity based upon

all needs is erroneous and provides a misleading framework for the study of mate selection as well as interpersonal selection in general.

Males and females in high self-acceptance couples indicated much variation in expressed self-acceptance. In contrast, those composing low self-acceptance couples were very similar in this respect. As a result of both the latter and the need-complementarity of low self-acceptance couples, it seems reasonable to conclude that the individual who was low in self-acceptance was attracted to persons from whom he presumably sought sources of completion of self. This notion is analogous to that suggested by Luckey (1960) relative to perception of self and ideal self as related to marital satisfaction. The low self-acceptance person's need gratification may indeed be heavily dependent upon external sources. Although the tendency was for individuals in high self-acceptance couples to have similar needs, these persons also indicate greater flexibility with respect to mate choice and probably also in person choice in general.

Implications for Future Research and Marriage Counseling

Marriage counseling is unique in that its focus is placed upon the relationship that exists between two people. The marriage, rather than the individuals, is often first viewed as the patient. It is apparent, therefore, that understanding of the interpersonal dynamics is perhaps of even greater significance than in other professionally therapeutic endeavors. The understanding of how individuals relate to and affect each other is of no less importance in the practice of pre-marital counseling.

Is it possible that self-acceptance, when considered as an indicator of personal adjustment, is an important variable for purposes of gaining insight into how an individual sees himself in contrast to the kind of person he would like to be in an ideal sense? (Winkler and Myers, 1963.) Is it not probable that satisfaction of needs is sought from external sources when certain qualities are lacking in the self? In this

sense, the individual may be seeking a completion of self. The latter, when pushed to its extreme, may be found in complementary neuroses where there is reciprocity of need satisfaction, yet only in an inconsistent and self-defeating manner.

In contrast to the above, is one's interpersonal competence adequate when he can function primarily within the framework of his own emotional resources? This individual seeks satisfaction of his needs as provided by others only occasionally. As a result, his interpersonal associations can be varied both in intensity and in quality. Present findings further suggest that great variability may exist in terms of the kinds of persons we choose as colleagues, acquaintances, friends, mates and so forth. In short, a primary source of motivation in direction of person choice may be determined by the "therapeutic potential" of a given relationship. This hypothesis is applicable also in consideration of relationships which, by definition, are of an emotionally unhealthy nature.

The findings of this study provide few definitive answers; rather, speculation would predominate. For example, personal satisfaction is one of the goals of marriage counseling. Are more satisfactory marriages contracted in which there is reciprocity or similarity of need satisfaction as a basis for mate selection? If future research offers insight in this direction, the counseling process theoretically can assist appropriate goals. However, as the experienced marriage counselor often determines, one of the primary underlying difficulties in marital conflict evolves as a consequence of unequal rates of emotional growth on the part of spouses. Both changes in and measures of extent of self-acceptance presumably could assist both counseling method and process. Second, this study has focused upon couple need structures as an important variable. The notion of need satisfaction from only one source is too restrictive, although the reverse may also exist. Interpersonal need-fits extended to a variety of contexts have decided implications for the counselor in the provision of guidance to-

ward increased mutuality both extra-maritally and within the marriage. A final pertinent problem is the area of adjustment and maladjustment in marriage and its relationship to interspousal need structure. Although values and attitudes have been explored as criteria of marital adjustment more recently, it could be speculated that the prediction of marriage outcome based upon interspousal needs is as fruitful an area of exploration as that of mate selection. Both the preventive and curative implications suggest that there is potential in these areas of inquiry for both theory testing and creative practice.

Summary

Some of the pertinent mate selection literature was noted. The use of traditional sociological variables reveals a tendency toward consistency of findings in contrast to psychologically oriented research. Two major hypotheses were formulated to include consideration of a qualifying variable, expressed self-acceptance. Individuals who composed high self-acceptance couples were generally similar in their respective need structures whereas those in low self-acceptance couples indicated complementary need patterns. Additional evidence indicated that low self-acceptance individuals chose mates like themselves in this respect. In contrast, much variation was found in couples where at least one mate was high in expressed self-acceptance. Implications for marriage counseling were suggested.

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Marital Satisfaction and Its Concomitant Perceptions of Self and Spouse¹

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The relationship of marriage satisfaction to personality variables used in describing self and spouse was investigated by correlating scores of the Marital Adjustment Scale and items marked in each of the eight octants of the Interpersonal Check List. Phrases in the categories of "Skeptical-Distrustful" and "Blunt-Aggressive" were most often associated with lack of satisfaction in marriage; this was true when they were used to describe self as well as to describe spouse. Phrases denoting warmth, generosity, cooperativeness when perceived in self and in spouse were reliably associated with satisfaction. Although the data do not demonstrate a causal relationship between marital satisfaction and self and spouse perception, they are consistent with such an interpretation. The implication for marriage counseling as person-centered rather than problem-centered is discussed.

Marriage counseling exists with little specific theory to guide it and very little research to substantiate its practices. For the most part marriage counseling grew up in answer to pressing family problems caused by the rapid changes of our society. Marriage patterns of the previous generation did not work; new answers had to be found. As a consequence, the major portion of marriage counseling that is done today is done through social service agencies and churches. Although those who are doing the counseling are increasingly aware of psychological principles and the importance of interpersonal variables, much of the practice remains problem-centered instead of person-centered. One of the factors counselors often overlook in the practical situation is the importance of the way in which their clients view themselves and their spouses.

The present study is based on the premise that interpersonal relationships depend in large part on what an individual

thinks he is and what he thinks the other person is. It is *perception* on which the expectations of self and the other are based and on which understanding and communication are largely dependent. Important to the satisfaction of the marriage, then, is one's perception of his own personality and that of his mate.

A theory of marital interaction based upon this conceptual framework has been advanced by Mangus (1957 a, b, c) and is generally supported in terms of personality theory by phenomenologists, self-theorists and social psychologists (Dai, 1952; Heider, 1944; Ichheiser, 1949; Lewin, 1935; Newcomb, 1950; Rogers, 1951; Sarbin, 1954; Snygg & Combs, 1949; Sullivan, 1949; Symonds, 1956).

The theory has been generally supported by the findings of a number of studies of marital interaction (Dymond, 1953, 1954; Kelly, 1941; Luckey, 1960 a, b; Mangus, 1957 a; Preston, Peltz, Mudd, Froscher, 1952; Stewart, 1951). No research has reported contrary findings; it would seem then, that there is sufficient evidence to associate marital satisfaction with perceptions of self and spouse. The nature of the association is still unclear.

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Luckey (1960 a, b) found that husbands and wives who indicated that they were satisfied with their marriage were those whose perceptions were in greater agreement with each other than were the perceptions of couples who were unsatisfied. Those studies did not attempt to discover what qualities the spouses saw in each other or in themselves; the only concern was with the degree of congruence in the pair's perceptions.

The present study seeks to determine the degree of correlation that exists between the subject's expressed marital satisfaction and (a) his perception of himself and (b) his perception of his spouse in terms of descriptive personality variables. The meaning of the associations that are revealed and their implications to the theory and practice of marriage counseling will be considered.

Design

The 80 married couples of the earlier study² had been evaluated on two independent measures; the Marital Adjustment Scale (Locke, 1951) and the Interpersonal Check List (Leary, 1956).

The Marital Adjustment Scale is composed of 22 items which inquire into a variety of facets of the marital relationship. Satisfaction of the pair is measured in areas such as: aims and goals of life; use of time; use of money; communication; sexual activity; companionship; affectional expressions; ways of settling disagreements. A list of specific offenses against the spouse may be indicated, such as, drunkenness, nonsupport, sterility, etc. The final item is a seven-point self-rating scale on which the subject is asked to rate the degree of happiness in his marriage. The response of each item is weighted appropriately in accordance with Locke's findings in his validation study (1951), and a total score is given each individual. High scores indicate a high degree of satisfaction.

The Interpersonal Check List (ICL) is a carefully constructed adjective list de-

signed in such a way that each of its eight variables relates to all the others. It may be diagrammed as a circle composed of eight equal pie-shaped pieces which represent descriptive personality categories whose given positions are determined by two coordinate axes whose origin is the center of the circle. The perpendicular axis represents the dimension of dominance-dependence; the horizontal axis represents a love-hostility dimension. The upper left quarter of the circle contains the phrases of two categories: Managerial-Autocratic and Competitive-Exploitive; these phrases describe strong, hostile qualities. The lower left quarter contains the items of the variables: Blunt-Aggressive and Skeptical-Distrustful; these are considered weak, hostile qualities. The lower right quarter of the circle with variables Modest-Self Effacing and Docile-Dependent represents loving, weak characteristics. The upper right quarter contains loving and strong qualities; its variables are termed Cooperative-Overconventional and Responsible-Overgenerous.

By checking the 128 adjective phrases contained in the ICL, subjects indicated qualities that they saw (a) in themselves and (b) in their spouses. The phrases are divided equally so that each of the eight variables is described by 16 phrases. These responses represent the subject's conscious verbalization of characteristics which he attributed to himself and to his spouse. Test-retest reliability correlations available on the ICL have been reported by octants to be .78 (La Forge, & Suczek, 1955). The sort of unreliability that results because of changes in one's self view is not considered undesirable in an instrument designed for self-perception.

In order to reduce the number of correlations, each single descriptive phrase was combined with one other in its same category and thus each of the eight personality variables was related to marital satisfaction by eight separate item correlations. The phrases were combined according to their relatedness as determined in the construction of the ICL; items thus represent two highly correlated phrases

²For a more detailed description of the sample population and the instruments used see Luckey (1960).

which describe one of the sixteen variables contained in the ICL (Leary, 1956: Fig. 1, p. 2). These items were given a score of two if the subject had marked both of the phrases, a score of one if he had only

marked one, and zero if he had marked neither.

Pearson Product-moment coefficients were obtained and are recorded in Table 1.

Findings

Table 1

Correlations between Marital Satisfaction and Perception of Self and Spouse

1. Managerial—Autocratic		Self	Spouse
Items	1. well thought of; often admired	.12	.26**
	2. makes a good impression; respected by others	.22**	.37**
	3. able to give orders; good leader	.13	.18*
	4. forceful; likes responsibility	.04	.11
	5. always giving advice; tries to be too successful	-.20**	-.27**
	6. acts important; expects everyone to admire him	-.07	-.17*
	7. bossy; manages others	-.14	-.15*
	8. dominating; dictatorial	-.21**	-.27**
2. Competitive—Exploitive			
Items	1. self-respecting; self-confident	.25**	.36**
	2. independent; self-reliant and assertive	.14	.23**
	3. able to take care of self; businesslike	.14	.13
	4. can be indifferent to others; likes to compete	-.06	-.11
	5. boastful; somewhat snobbish	-.11	-.20**
	6. proud and self-satisfied; egotistical and conceited	-.01	-.04
	7. thinks only of self; selfish	-.16*	-.34**
	8. shrewd and calculating; cold and unfeeling	-.18*	-.24**
3. Blunt and Aggressive			
Items	1. can be strict; hard-boiled when necessary	-.01	.01
	2. firm but just; stern but fair	.12	.29**
	3. can be frank and honest; irritable	-.30**	-.13
	4. critical of others; straightforward, direct	-.14	.02
	5. impatient with others' mistakes; sarcastic	-.32**	-.37**
	6. self-seeking; cruel and unkind	-.16*	-.22**
	7. outspoken; frequently angry	-.19*	-.34**
	8. often unfriendly; hard-hearted	-.24**	-.32**
4. Skeptical and Distrustful			
Items	1. can complain if necessary; resents being bossed	-.17*	-.11
	2. often gloomy; skeptical	-.40**	-.26**
	3. able to doubt others; hard to impress	-.13	-.09
	4. frequently disappointed; touchy, easily hurt	-.36**	-.30**
	5. bitter; resentful	-.30**	-.31**
	6. complaining; rebels against everything	-.15*	-.27**
	7. jealous; stubborn	-.25**	-.44**
	8. slow to forgive; distrusts everybody	-.31**	-.30**
5. Modest—Self-effacing			
Items	1. able to criticize self; easily embarrassed	-.09	.16*
	2. apologetic; lacks self-confidence	.13	-.04
	3. can be obedient; easily led	.10	.23**
	4. usually gives in; modest	-.16*	.03
	5. self-punishing; timid	-.22**	-.23**
	6. shy; always ashamed of self	-.11	-.23**
	7. passive, unaggressive; obeys too willingly	-.04	-.17*
	8. meek; spineless	.03	-.10

6. Docile—Dependent		Self	Spouse
Items	1. grateful; often helped by others	.23**	.30**
	2. admires, imitates others; very respectful to authority	.04	.07
	3. appreciative; accepts advice readily	.23**	.35**
	4. very anxious to be approved; trusting, eager to please	-.02	.08
	5. dependent; hardly ever talks back	.03	-.14
	6. wants to be led; clinging vine	.07	.02
	7. lets others make decisions; likes to be taken care of	-.10	-.05
	8. easily fooled; will believe anyone	-.13	-.19*
7. Cooperative—Overconventional			
Items	1. cooperative; always pleasant and agreeable	.23**	.33**
	2. eager to get along; wants everyone to like him	-.06	.05
	3. friendly; sociable and neighborly	.25**	.33**
	4. affectionate, understanding; warm	.31**	.54**
	5. too easily influenced; wants everyone's love	-.15*	-.12
	6. will confide in anyone; agrees with everyone	.04	-.14
	7. fond of everyone; friendly all the time	.05	.02
	8. likes everybody; loves everyone	-.05	.05
8. Responsible—Overgenerous			
Items	1. considerate; kind and reassuring	.29**	.43**
	2. encourages others; tender and soft-hearted	.18*	.26**
	3. helpful; enjoys taking care of others	.14	.43**
	4. big-hearted, unselfish; gives freely of self	.08	.33**
	5. forgives anything; too lenient with others	-.06	-.04
	6. oversympathetic; tries to comfort everyone	-.15*	-.09
	7. generous to a fault; too willing to give to others	-.04	-.04
	8. overprotective of others; spoils people with kindness	.04	-.09

* = $p < .05$

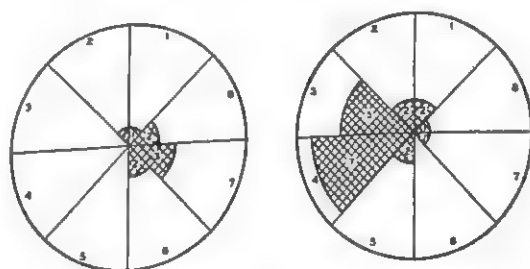
** = $p < .01$

The items of the ICL are so arranged that they may be examined for a quantitative value as well as a qualitative. The low numbered items are phrases which are "mild" or "moderate"; as the numbers increase, so does the intensity of the characteristics. Thus Item 1 in each instance is the "mildest" and Item 8 is the most extreme phrase of each category. It can be observed that in general as the item increases in intensity, the more likely it is to be associated negatively with marital satisfaction.

Categories 3, 4 and 5 which represent cold, hostile, weak characteristics are predominantly associated with lack of marital satisfaction when perceived in either self or spouse. Categories 7 and 8 which represent warmth with neither excessive strength nor weakness tend to be associated with satisfaction.

Figure 1 is a pictorial presentation of the items of self-perception that were found significantly related to marital satisfaction in each of the eight categories. The first

circle indicates the number of items positively and reliably associated with marital happiness and the second circle those neg-



Positive Correlations Negative Correlations

Fig. 1. Self-perceptions. Shaded portions represent number of items per octant correlated with Marital Satisfaction.

Key

1. Managerial-Autocratic
2. Competitive-Exploitive
3. Blunt-Aggressive
4. Skeptical-Distrustful
5. Modest-Self Effacing
6. Docile-Dependent
7. Cooperative-Overconventional
8. Responsible-Overgenerous

actively associated. The item score for any one quadrant may vary from 0 to 16. By totaling the items related reliably in the positive direction, those in the negative, and the nonsignificantly related items the full quadrant score of 16 items is obtained. In this way each individual item is represented only once.

For the most part persons high in marital satisfaction saw very few characteristics in themselves in the two left quarters of the circle; however, those who were not satisfied with their marriage marked a predominant number of items in those "cold and hostile" quarters.

Figure 2 presents the items that were significantly correlated when *spouse perceptions* were studied. In general more significant correlations both positive and negative were found in regard to spouse perceptions than in regard to self-perceptions. The over-all configuration of Figures 1 and 2 is similar in that persons in satisfactory marriages tended to see warm and loving qualities both in their spouses and in themselves, while those in unsatisfactory marriages saw both their mates and themselves as distrustful, blunt, competitive.

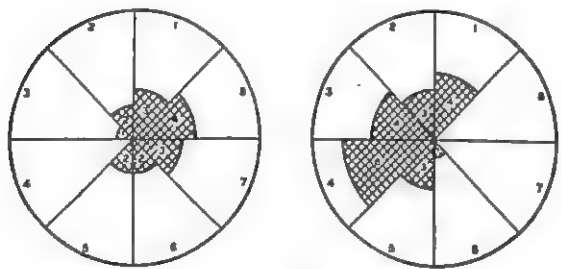


Fig. 2. Spouse perceptions. Shaded portions represent number of items per octant correlated with Marital Satisfaction.

- Key
- 1. Managerial-Autocratic
 - 2. Competitive-Exploitive
 - 3. Blunt-Aggressive
 - 4. Skeptical-Distrustful
 - 5. Modest-Self Effacing
 - 6. Docile-Dependent
 - 7. Cooperative-Overconventional
 - 8. Responsible-Overgenerous

In order to discover what these relationships suggest and contribute to the understanding of marital interaction, they will be observed octant by octant and finally in total configuration.

Personality Variables and Satisfaction

1. *Managerial-Autocratic.* Persons in satisfactory marriages tended to see both themselves and their spouses as making "a good impression." Admiration for the spouse was expressed as "well thought of; often admired," and "able to give orders; good leader." Strength in one's spouse—but not domination—was associated with satisfaction.

The spouse that was seen as "always giving advice, acting important, expecting everyone to admire him, managing others, and dictating" was not very satisfying. Also subjects who saw themselves as advice-giving and dominating were those who rated low in marriage satisfaction. Apparently, there are few satisfactions to be found in the marital relationship when one partner is either being dominated or is dominating the other. It may be that those same subjects who saw themselves as dominating are married to persons whom they saw as being even more dominating. If this is the case, the power struggle itself may be a source of marital dissatisfaction.

The first four items in Category 1 represent traits that are highly valued in our society: the ability to command respect of others and to lead. Subjects who saw these traits in their spouses might also be expected to find marriage satisfactory. That the satisfied subjects saw these same qualities in themselves would support the assumption that a sense of value in self contributes to the formation of a successful, intimate relationship.

Item 4 may fail to show significant correlation because the descriptive phrases that are combined are less compatible to each other than the other pairs of phrases. Being "forceful" may have an unpleasant connotation for some subjects while "liking responsibility" would be considered a good thing by most subjects.

2. *Competitive-Exploitive*. This category, like 1, seems to have a kind of dual nature constructed into it. The first three items would generally be considered socially desirable, but the more extreme forms of the trait as expressed in the other items are obnoxious. It is not surprising that the subject who is not happy in marriage would see his spouse as boastful, selfish, cold and unfeeling; neither is it surprising that one who sees his spouse as having those characteristics would not be pleased with his marriage. However, the self-perceptions of the subject who was not happy include these same items. The marital interaction represented in this kind of mutual perception might be depicted by the wife who says, "Sure, I'm shrewd and calculating. I *have* to be because my husband is so selfish and unfeeling!"

3. *Blunt and Aggressive*. The one item that is positively and reliably related to marital satisfaction in this category is "firm but just; stern but fair" when it was perceived as a quality of the spouse. This quality connotes judgment; it is a characteristic that one might associate more with a parent than a spouse. As a matter of fact, this description may suggest that the good parent and the good spouse are congruent concepts.

The phrases in this category tend predominantly to be associated with lack of satisfaction. The last four items are all expressions of strong hostility, and all were perceived both in self and in spouse in unsatisfied subjects. As in the first two categories, the dissatisfied subject painted himself negatively; he not only accused his mate of impatience, cruelty, hard-heartedness, but he confessed to these things in himself.

Item 3 is associated with lack of satisfaction particularly when perceived as a characteristic of self. It would be expected that a dissatisfied partner would be able to recognize his own irritability, and it may be that he blames part of his marital difficulties on his own ability to be "frank and honest."

It may well be that those who see themselves as angry people also see their spouses

as being angry, perhaps even angrier than they are themselves. Or it may be that when one sees his spouse as blunt and aggressive, he reacts by becoming impatient, sarcastic, and unfriendly.

4. *Skeptical and Distrustful*. This is the only category in which every correlation is negative, and all reach a high level of significance except one of the items of self-perception and two of the spouse. The general negative self-picture of the unsatisfied subject is strongly emphasized by the seven items he indicated that he saw in himself. Items 2 and 4 when perceived in self were more closely associated with lack of marital satisfaction than any other items in the entire checklist. Both of these may well reflect the discouragement and disappointment that an unsatisfactory marriage contributes to one's feelings about himself.

Of the 64 items of the ICL the one with the highest negative correlation coefficient when perceived in the spouse is "jealous and stubborn." The subject saw his spouse as not trusting him. This suggests a spouse who lacks security and who feels the need to defend himself.

The pervading quality described by the items in this category is distrust. The implication is clear; one who can neither trust himself nor his spouse can hardly be expected to have a happy marital relationship. If trust is a prerequisite of love, Fromm's belief would be supported that marriage problems arise far more from the incapacity of couples to love than from the fact that they have mismated.

5. *Modest-Self Effacing*. In general, subjects who were in satisfactory marriages tended to see both themselves and their spouses as somewhat diffident—perhaps what might be called "appropriately modest" in terms of our society. The more extreme items which connote shame, punishment of self and passivity are negatively associated, especially when seen in the spouse. It seems that although a degree of modesty in one's self and spouse may be desirable, too much of it may not be conducive to a good relationship.

Item 3 poses an interesting question in that obedience in one's spouse is positively

associated with marital adjustment, yet so are item 3 in Category 1, and item 2 in Category 2, which are expressions of autonomy and independence. Perhaps in the marriage that "works," the spouse is one which is seen as being sometimes independent and capable of leadership and sometimes dependent and easily led.

Item 4, perceiving one's self as "usually giving in," is negatively associated with marital satisfaction and would suggest that one who sees himself in this light may well feel imposed upon in the marital relationship.

It seems that a spouse is not a very satisfactory one if he is seen as either not fighting back enough or as fighting back too much!

6. *Docile-Dependent*. Appreciativeness (Items 1 and 3) when attributed either to self or to spouse is associated with marital success. None of the other items in this category show much correlation except 8 which is negatively associated and indicates perception of the spouse as one who is "easily taken in." Item 5 when descriptive of spouse almost reaches the level of significance and is in the negative direction; independence and "talking back" may be characteristics that are associated with good spousal adjustment.

7. *Cooperative-Overconventional*. Phrases within this category were in general positively associated with satisfaction when seen either in self or spouse. Item 4 is the one item of the entire checklist which is most closely associated with good marital adjustment; this is true for both self and spouse perceptions. People who are outgoing, warm, and friendly are likely to see their marriages as happy ones; they also see their spouses as loving ones.

8. *Responsible-Overgenerous*. In this octant we see again the familiar pattern of mild adjectives being associated in the positive direction and extreme ones leaning toward the negative. Consideration and tenderness in both self and spouse were found to be concomitant with marital satisfaction, while oversympathy and overprotection were unrelated to it. The high positive correlations of the first four items as seen in

the spouse, are strongly suggestive of Kelly's early findings (1941) which indicated that there is an element of idealization of one's spouse that accompanies satisfaction in marriage. It is as if the happily married person says, "I am considerate, tenderhearted, helpful, and unselfish, but my spouse is more so!"

Implications

The over-all pattern of findings suggests that many personality characteristics that are significantly associated with marital satisfaction are perceived by the subject as being part of his self as well as a part of his spouse. There may not be the wide gulf between the low opinion one holds of his spouse and the high one he holds of himself, or vice versa, that is often thought to exist when there is marital conflict. The same qualities which were associated with marital satisfaction when perceived in self were associated with it when perceived in spouses.

The similarity of self and spouse perception patterns presents the question of whether spouses in general may not tend to see themselves as being alike. It may be argued that one views his spouse as a kind of extension of himself and thus would mark the same phrases to describe both himself and mate. One might expect greater similarity to be "felt" by subjects who are satisfied with their spouses than by those who are not. Speculations of this kind have not been answered by this study and would require a pair study rather than one using individual subjects.

Throughout the study the question of pair relationship has suggested itself. We cannot tell by the data whether two individuals within a specific marriage hold similar or complementary perceptions of themselves and mate. A study on the basis of married pairs, with an analysis according to the sex of each subject, might reveal interaction patterns that depend not only on the subject's perceptions but his perceptions in relation to those held by his spouse.

Figures 1 and 2 make obvious the differences in the *kinds* of adjectives unsatisfied and satisfied subjects used in self and

spouse descriptions. Far more descriptive phrases in the cold, hostile half of the circle have been marked by the dissatisfied. Category 4, Skeptical and Distrustful, has by far the greatest number of items correlated with unhappiness and has none related to satisfaction. On the other hand, satisfied subjects described themselves as loving persons, (Categories 6, 7, and 8) while the unsatisfied saw very few warm, out-going characteristics in themselves. These same directional differences are observable in the perceptions of the spouse as held by both groups.

The undefined problem of the social desirability of the items undoubtedly influences the findings of this study to some degree. The ICL has not been analyzed in terms of the social desirability of its items, nor is it possible to speculate just how this factor would enter into the results if such an index were determined. On the basis of Edwards' (1957) contention that social desirability and conformity are related, one would expect some spurious correlation of marital satisfaction and the more socially acceptable items. However, Levy's (1959) findings and those of Loomis and Spilka (1963) have not supported this positive association, and a growing body of literature (Jackson, 1961; Messick, 1960; Spilka, 1961) points up the confused issues involved in item response and social desirability.

It is important to keep in mind that the perceptions of both self and spouse are not "real" or objective measures of persons. These perceived concepts represent not only a stimulus and a response to that stimulus but undoubtedly contain certain distortions or reflections originating within the perceiver as well as in the object perceived. This kind of "built in" perception would be likely to magnify the association between the degree of marital satisfaction and the perception of the spouse. The subject who is dissatisfied is likely to see and stress the unfavorable image of his spouse while the satisfied would tend to glorify the spouse.

One of the chief limitations of this study is its failure to establish evidence that the

relationships that have been found are causal. Whether the dissatisfaction of the marriage created the unfavorable perception of self and spouse or whether the unfavorable perceptions created the dissatisfaction cannot be deduced from the evidence of this study. It might be supposed that each condition would somewhat modify the other.

It is reasonable to suppose that when the couple married, neither held an unfavorable concept of the other; it is also reasonable to suppose that should the couple have marked the marital satisfaction scale soon after marriage, they would have made higher scores. How much consistency exists in one's perception of self is still a debatable question, but there is considerable evidence to suggest that the self concept is fairly stable over a period of time. It might be hypothesized then that as marital satisfaction increases or decreases, the favorable perception of the spouse tends to increase or decrease, and that as the spouse image varies, so does the marital satisfaction. The concept of one's self, being more stable, would be expected to reflect *less* movement as a result of change either in marital satisfaction or in one's spouse.

Such reasoning would emphasize the basic importance of the self concept to marital satisfaction. Evidence has been presented to indicate that those who saw themselves as distrustful, aggressive persons were less satisfied in marriage; it would be argued that such a derogatory view of one's self would result in feelings of worthlessness and self-rejection and a preoccupation with one's shortcomings that would interfere with marital adjustment.

Concern with the client's image of himself is nothing new to the personal counselor, (Bugental, 1955; Frondizi, 1952; Haimowitz, 1948; Lecky, 1945; Raimy, 1943; Rogers & Dymond, 1954) but the marriage counselor tends to concentrate on problem situations within the marriage: sex adjustment, in-law reconciliations, financial problems, religious differences. If perceptions of one's self are importantly related to marital satisfaction (and they seem to be), and

if perceptions of one's self are modifiable through the counseling process (and they seem to be), this suggests an approach to the re-establishment of marital compatibility that may be more direct and more substantial than dealing with important though transient problems.

Conclusion

This study, which was an empirical investigation of the correlation of scores on the Marital Adjustment Scale and the Interpersonal Check List as marked by 80 couples, has added information to the growing body of research into the relationship of social perception to marital satisfaction. It has confirmed the assumption that there is a reliable association between the degree of satisfaction in marriage and certain kinds of descriptive perceptions of self and of spouse.

Lack of marital satisfaction was closely associated with more items contained in the category "Skeptical-Distrustful" than in any other; the adjoining variable "Blunt-Aggressive" had the second highest number of items associated. Subjects marked these cold and hostile descriptive phrases as being characteristics which both they and their spouses possessed.

The bulk of the items positively related to marital satisfaction were found in the categories which indicated cooperativeness, responsiveness, and generosity. Subjects in satisfactory marriage relationships saw both themselves and their mates as predominantly warm, loving persons.

It was suggested that perceptions of self and spouse form the basis of marital interaction, and that it is these important perceptions which should engage the counselor's effort and concern rather than the problem situations within the marriage. Sexual maladjustment, disagreement over the budget—even the interference of the in-laws—are symptomatic of the interaction between the couple. Counselors working with marital problems as well as with other problems might well deal with perceptions of interpersonal relationships as well as with points of friction.

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Changes During Counseling Appropriate to the Client's Initial Problem

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Changes during counseling in a problem area are predicted to be greatest for clients whose initial status in that area deviates most from normal persons. Self-ratings by college students before and after psychological counseling and by non-counseled students who were retested after 12 weeks were obtained and seven factor scores computed. An analysis of covariance for the four groups resulted in significant F-ratios for three factor scores. Tentative support was obtained suggesting that initial status in a problem area must be considered in evaluating changes during counseling in that area.

Ford (1959) has pointed out that the expected changes in individuals undergoing psychotherapy will vary from client to client, so that different clients would be expected to change in different directions and in different ways. What may be a desirable change for one client may be an undesirable or unnecessary change for another client, and the expected change for a client will depend upon the nature of his problems at the beginning of counseling or psychotherapy. If this position is accepted, then it is essential to evaluate changes in the client as they are related to his initial diagnosis. An anxious or unsociable client needs to become less anxious and more sociable, but an underanxious and overly sociable client may need to become more anxious and less sociable. Since these problems are so varied from one client to another, and since diagnostic classifications are so weak, a major difficulty in doing research in counseling is this variability in the initial status of the client and therefore in the goals involved in the

therapeutic process. But we can classify certain types of clients together and study changes during therapy for these types of clients. Such studies frequently use such broad classes of clients that meaningful predictions of expected changes cannot be made and, therefore, a study of the thesis that the expected change in the client depends upon his initial status in a certain area is not possible.

Because of the failure of the diagnostic classifications to provide much valid information as to the nature of the counseling to be used in a particular case, and because of the simplification of counseling research which would be achieved if such diagnosis could be ignored, efforts have been made to develop global measures of change in therapy which could be applied to all cases. For a time it was hoped that a measure of self-satisfaction as indicated by the self-ideal discrepancy could serve this purpose. Research reported by Butler and Haigh (1954), Ewing (1954) and others show measures of self-satisfaction to characteristically change toward increased self-satisfaction during counseling or psychotherapy and for such changes to be significantly correlated with estimates of success of counseling. However, as indicated in a study by Akeret (1959), it is also

¹Portions of the data were processed through support from grants from the National Institute of Mental Health of the USPHS Grant M-1041. Parts of the study were presented at the meetings of the American Psychological Association in New York in September, 1961.

clear that this is not as global a measure as was first hoped. Self-satisfaction varies depending upon the nature of the items which make up the measure and, while such a measure seems an essential ingredient in any systematic study of change during counseling, it is not itself adequate.

Another effort at a global measure of success involves a standardization of judgments of change by the counselor or an independent person with knowledge of the case. This is best illustrated by the Movement Scale developed by Hunt and Kogan (1950) and this scale has served a useful purpose in evaluation of change during counseling (Hunt, *et al.*, 1959). In the case of the Movement Scale the judge attempts to make a reliable judgment of the amount of change in one client as compared with another client even though the changes may occur in quite different problem areas for the different clients. Global criteria of success in counseling are important, but it seems likely that clients with different initial problems must be evaluated in regard to change on different scales or variables. The research reported here is presented as an example of an approach to the assessment of change in clients which depends upon the client's initial status in certain problem areas.

The hypothesis to be explored suggests that the expected change in a certain problem area for a client depends upon the client's initial status in that problem area. For clients where there is a significant problem in a certain area change toward normal adjustment in that area is predicted, but for clients who do not have a significant problem in that area change toward normal adjustment will not be present or will be minimal.

Method

Ninety college students who were given psychological counseling as a part of research projects in the Student Counseling Service at the University of Illinois filled out a test in which self-ratings were made at the time when they entered counseling and at the conclusion of counseling. Counseling was conducted by eleven experienced

counselors and the number of interviews ranged from 3 to 78 with a mean of 16 interviews and the median time interval between pre- and posttesting was 17 weeks. The testing instrument used (Ewing, 1954) consisted of self-ratings on 100 traits. The rating form was factor analyzed (Hunt and Ewing, 1957) and yielded the seven factor scores listed in Table 1. These seven factor scores represent seven different ways in which a person may describe himself. These scores represent the areas of adjustment or problem areas referred to in the study and the scores are subject to all of the familiar limitations of self-ratings.

A group of college students selected largely from psychology classes who did not receive counseling was also tested on two occasions with approximately 12 weeks intervening. These students are referred to hereafter as the normal group and the test-retest reliability coefficients for these students are listed for each factor score in Table 1 along with the mean scores for the two testing occasions. The possible scores for each factor range from 10 which means the traits in question are all rated as "very uncharacteristic of self" to a score of 50 which means that the traits in question are all rated as "very characteristic of self." A score of 30 represents an average of neutral ratings.

Table 1
Mean Scores and Test-Retest Reliabilities of
Factor Scores for Non-Counseled Students

Factor Score	N	Mean Score Initial Testing	Mean Score Retest	r (initial test and retest)
1. Dissatisfied	60	30.64	29.38	.80
2. Outgoing	61	34.60	35.03	.84
3. Contrary	62	27.32	27.24	.73
4. Hard Worker	61	35.45	35.80	.73
5. Conventional	61	29.36	29.36	.68
6. Patient	62	34.13	34.19	.70
7. Creative	62	34.86	35.47	.61

A state of normal adjustment in any problem area is defined for the purposes of this study as the mean score of the group of normal, non-counseled students. The assumption that all clients and coun-

Table 2
Pre- and Post-Counseling Scores of Three Groups of
Clients and Test-Retest Scores of a Group of Normal Students

Factor Scores	N	Pre-counseling scores		Post-counseling or retest scores			F-ratio
		Mean	Difference (Counseled-Normal)	Mean	Adjusted mean	Difference Adjusted mean (Counseled-Normal)	
1. Dissatisfied							
High scoring clients	29	43.37	12.73	33.06	25.20	-7.14**	7.27**
Middle scoring clients	28	37.28	6.64	30.00	27.75	-5.09**	
Low scoring clients	31	29.43	-1.21	26.45	30.52	-1.82	
Normal group	60	30.64		29.38	32.34		
2. Outgoing							
High scoring clients	34	38.98	4.38	36.84	33.71	-.72	.26
Middle scoring clients	22	33.80	-.80	33.69	33.50	-.97	
Low scoring clients	33	25.34	-8.26	29.96	34.54	.11	
Normal group	61	34.60		35.03	34.43		
3. Contrary							
High scoring clients	31	34.75	7.43	29.82	25.22	-2.18*	2.24
Middle scoring clients	28	27.44	.12	25.64	25.71	-1.69	
Low scoring clients	31	21.05	-6.27	23.41	27.59	.19	
Normal group	62	27.32		27.24	27.40		
4. Hard Worker							
High scoring clients	29	42.47	7.02	41.20	37.13	+1.08	2.58
Middle scoring clients	32	37.03	1.58	37.75	37.12	1.02	
Low scoring clients	29	29.11	-6.34	33.93	38.25	2.20	
Normal group	61	35.45		35.80	36.05		
5. Conventional							
High scoring clients	34	34.62	5.26	31.70	27.70	-1.60	1.07
Middle scoring clients	28	29.19	-.17	28.90	28.97	-.33	
Low scoring clients	28	22.72	-6.64	24.55	28.63	-.67	
Normal group	61	29.36		29.36	29.30		
6. Patient							
High scoring clients	30	38.53	4.40	35.13	29.72	-3.88**	2.70*
Middle scoring clients	33	32.33	-1.80	34.33	34.77	1.17	
Low scoring clients	28	26.03	-8.10	29.12	32.80	-.80	
Normal group	62	34.13		34.19	33.60		
7. Creative							
High scoring clients	34	44.10	9.24	41.07	36.50	.77	3.33*
Middle scoring clients	30	35.20	.34	37.03	37.26	1.53	
Low scoring clients	27	27.70	-7.16	32.03	35.89	.16	
Normal group	62	34.86		35.47	35.73		

*p less than .05

**p less than .01

selors are working toward this goal represented by the status of the average college student is not entirely justified. Any statistical categorizing of clients as a basis for estimating the goals which these clients have in their counseling efforts seems certain to be inappropriate in some cases, but if predictions of change and directions of

change can be made on such a basis the results will be valuable.

In the analysis of the data the counseled students were divided into three groups. For each factor score the highest scoring third, the middle third and the lowest scoring third were selected so that comparisons could be made of changes of counseled

groups who differ before counseling on these factor scores. The counseled groups with the most severe problems are defined as those whose pre-counseling scores differ most from the mean score of the normal students.

As a basis for evaluating changes in these groups and in the normal and non-counseled students, an analysis of covariance (McNemar, 1959, pp. 343-356) for the four groups was performed for each of the seven factor scores. By means of the analysis of covariance it is possible to compare the post-counseling groups on the various scores when corrections are made for pre-counseling differences between the groups and for correlation between pre- and post-counseling scores. The adjusted means for post-counseling or retest scores in Table 2 are corrected in this fashion and differences between these adjusted mean scores represent differences other than what may be accounted for by pre-counseling differences between the various groups and by correlation between pre- and post-counseling scores. It is predicted that the counseled groups for each factor which are initially most different from the normal group should show the largest change in the direction of the mean of the normal group, as evaluated in terms of the difference between the adjusted post-counseling mean of the counseled and normal groups.

Results and Discussion

Significant F-ratios for factors labeled *dissatisfied*, *patient* and *creative* and a nearly significant ratio for the factor labeled *hard worker* indicate that counseling may have been associated with change in regard to these characteristics. It is apparent that the *dissatisfied* score shows, by far, the largest change and the counseled groups which are initially most different from the normal group show the largest change in the direction of the mean score of the normal group. For this score, the predicted outcome is obtained at a significant level.

The client group with the highest *patient* scores changed significantly toward the

mean normal student score, but the client group with low *patient* scores was even more deviant from the normal group and changed slightly in a direction away from the mean normal student score. The client group which deviated from the normal group because of high *contrary* scores changed toward the mean normal student score, but the client group with deviant low scores changed only slightly in the predicted direction.

Client groups do not show any consistent change for scores labeled *outgoing* and *creative*.

In the case of the *hard worker* score all three groups of clients show a moderate increase in this score and in the case of the *conventional* score all three groups of clients show a slight decrease.

Part of the lack of consistency of results which is found in Table 2 may be due to the assumption that changes which occur will be in the direction of the mean score of normal students. In only 12 of the 21 instances in Table 2 do groups change in this direction. Results for the *hard worker* and *creative* scores suggest that social desirability needs to be considered in predicting change. An index of social desirability based on the mean ratings by students of the ideal self (ratings of the way they would like to be) was computed, and in 14 out of 21 instances the groups in Table 2 change in this direction.

The data available for the study included client ratings of their counselors on the same items on which they rated themselves. For the *conventional* score clients rate their counselors on the average as less *conventional* than themselves. Since all three counseled groups changed on this score in the direction of this mean rating of counselors, it was suggested that the clients' perception of the counselor might be associated with the changes. Consequently the mean ratings by clients of their counselors was taken as an index of the counselor stereotype and in 17 out of 21 instances the changes for the groups were in this direction.

These explorations suggest that the direction of change to be predicted is a complicated affair, but also that such directions

of change can be specified to a degree so that it should be possible to conduct research in this area.

The results of this study give support for the general hypothesis that the initial status of a client in a certain problem area must be considered in evaluating the changes which may occur in that area. In some cases differences between groups of clients in initial status in a problem area did result in differences in degree of change in that problem area. The results of the study do tend to support Ford's position that evaluation of the outcome of counseling must vary from client to client.

The mean score of normal students was found to be an inadequate statement of expected change in counseling, and the necessity of careful and precise statement of the expected direction of change in various dimensions of personality is underlined by the results of the study.

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Comment

This very interesting paper both illustrates and attempts to cope with some of the complexities of evaluation of counseling outcomes. Ewing describes this as an exploratory study; he is certainly exploring in an area where greater understanding is sorely needed.

The study deals with three major problems that any researcher in this area must be concerned with: the nature of norm groups, the goals of counseling, and measurement techniques. I want to comment briefly on each.

1. *Norm group.* The use of non-counseled students to make up the norm group is reasonable. Yet a sizeable portion of the group probably needs counseling as much as do those who seek it out. Too, some of

these normals probably did receive some sort of counseling during the period of the study from sources about which Ewing had no information or control: minister, friends, parents, professors, etc. The point is that it is unlikely that all members of the norm group were as "normal" as might be assumed.

It would have been interesting if information about the range of the test scores of the normal and counselee groups had been provided. There probably is considerable overlap. Also, since some of the change in the experimental group was simple regression toward the mean, this could have been adjusted for by dividing the normal group into thirds, similar to what was done with the counselees, and a comparison

made of the changes of appropriate subgroups of counselees and normals.

2. *Goals of counseling.* In spite of the design of the study, Ewing points out that it is not likely that either counselees or counselors are always working towards this operational definition of normal adjustment. It may well be that some of the changes which are contrary to the predictions of the study are things that both counselee and counselor would hold in high esteem. Don't counselors have an obligation to sometimes assist counselees to learn something more than just average adjustment tasks and skills? I think so. Ewing discusses this as a matter of social desirability; on occasion this is a matter of personal goals and self responsibility in which a person should express himself.

3. *Measurement problems.* Ewing gives considerable attention to the problems of measuring change and made certain statistical corrections to minimize error. I have pointed to matters of regression and range and suggested dividing the norm group into thirds. But the problems involved in a test-retest measure are quite complex; recently a whole book (Harris, 1963) was devoted to problems in measuring change. Counselors may find special help in the chapter by Bereiter.

There are several other points to bring out. One has to do with what was going on in the counselor-counselee sessions. Ewing calls it counseling. Considering the number of contacts per counselee, some would call it therapy. If therapy is for the mentally ill and upset, then the general conclusion in the past has been that those who have not been seriously ill profit the most from it. However, it seems likely that the subjects in this study are not so deteriorated as

some "abnormals" are. Individually the subjects are functioning in an academic community. They may be deviate and distressed but are not so extremely disturbed but what they can entertain new ways of dealing with themselves and their environment.

In such a case, contemporary work with the concept of cognitive dissonance supplies a possible theoretical framework for the interpretation of these results. It seems that the voluntary participation in a counseling setting where new ways of acting and feeling are considered by the counselee is an excellent situation for this theory to have its power tested.

This study gives some indication that counselees' change is not in response to their notions of a norm group but rather to a model. It should not come as much of a surprise that the model is the counselee's perception of his counselor. I think Ewing underplays the significance of this finding. This illustrates again that the client will not let the counselor be "neutral." Studies of prediction of change must consider the counselee's perception of the counselor. If this is so—and I think it is—then counselors might well give more consideration to the kind of model they are perceived to be. Perhaps counselee change can be achieved by the counselor role playing, deliberately providing the counselee model roles to emulate.

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Evaluation of a Group Counseling Procedure

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In evaluating the effectiveness of a group counseling procedure five groups of 60 students each were compared. Results indicated that the groups, while comparable in ability, differed in initial gpa. As a function of counseling, the Experimental Group's gpa became comparable to the Baseline Group's, and significantly higher than the Control and Dropout Group's gpa. The Wait Group did not improve until after counseling. Gpas of the Control and Dropout Groups did not improve at all.

Since this investigation stressed the control of relevant baseline, temporal (criterion measures were taken over eight semesters) and critical motivational variables, it was concluded that the group counseling procedure described was effective in improving scholastic behavior.

There is an increasing recognition among professional workers that the quality of work required for academic attainment is qualitatively different from that required in prior academic settings. As Robinson (1961, p. 11) put it, "college requires higher level work skills." It is also recognized that lack of appropriate performance (performance consistent with the student's academic potential) is often a function of more than a mere lack of strategic study skills. Shaw (1955, p. 465) aptly points out that "... students fail in their course work because of social and emotional disturbances. Therefore, an adequate how to study program must offer assistance to the individual student beyond the mere teaching of study techniques." This point is compellingly illustrated by one student's communication to us, "I know I can do it, I know what I have to do . . . I've read the study books, but I just can't seem to get myself to set down and do it now." There are, then, problems in areas of motivation, goal definition, commitment, personal difficulties and conflicts which impinge upon, mitigate, and interfere with the adequate utilization of time and ability (Neugeboren, 1958; Rust, 1958).

The group counseling experience with which this research deals, the Study Habits Seminar (shs), is based on the recognition

of the complex variables of which scholastic performance is a function. It is addressed to students who feel they need an approach to their university experience which is more consistent with the higher level demands that exist there. It also concerns itself with the needs of students who have the capacity to perform in an academic setting where the demands for independent work are great and the competition keen, but who, for reasons not directly related to their ability, do not perform at a level consistent with their potential.

The aim of helping persons to fulfill their potential through the exploration and learning of new attitudes, values and skills has traditionally been within the province of individual counseling. That which is relatively new is the group or multiple aspect of counseling: a method wherein a trained psychologist works in a group setting with several counselees who manifest several common concerns. Goldman (1962) cogently points out the confusion that exists in the group counseling field between the process and content dimensions, and the confounding of teaching, guidance, group or multiple counseling, and psychotherapy. Group counseling as we conceive of it "weds" the insights of group dynamics, group psychotherapy, and psychological counseling (Ofman, 1963b).

The Problem

Based on students' reports of their experiences in such a group setting, psychologists working with counseling groups as well as with individuals who had been participants, felt that the study habits seminar helped persons to deal with scholastic demands in a more satisfactory fashion. Students who participated in group counseling reported gains in grades, seemed to find more purpose in their work, felt that, "it was more an important part of me," seemed to find their work more satisfying and less of a burden.

For many reasons it was important to assess the overall effectiveness of this group counseling procedure. An extensive review of the literature on the effectiveness, in scholastic settings, of group counseling revealed a dearth of clear-cut finding in the area, for as Entwisle (1960, p. 246) points out, many of the studies "... express expert opinion rather than the results of empirical findings." Importantly, a variable of central importance, motivation, was not controlled in many of the reported studies. Some studies included no control groups at all. Hewer, for example, evaluated group and individual counseling on vocational problems, but decided, "no definite conclusion can be drawn Should further experimentation . . . be undertaken, a control group should be used, drawn from the same population from which the class comes" (Hewer, 1959, p. 665).

The difficulty in evaluating the literature on outcomes in unequivocal terms stems in the main from its methodological deficits. One finds lack of good experimental design, failure to use the proper control groups for motivation or baseline factors (Charles, 1951; Gazda & Ohlsen, 1961; Hoyt, 1955; Ransom, 1955; Shaw, 1955; Stewart, 1958; Tresselt & Richlin, 1951; Winborn & Schmitt, 1962), or failure to use control groups altogether (Arbuckle, 1949; Calia, 1957; Froelich, 1958; Hewer, 1959; McGowan, 1962; Robinson, 1945; Wittenborn, 1944). There is a heavy reliance upon "before-after" studies and an almost predominant use of immediate rather than long-term criterion measures.

Clearly the problem of assessing the effectiveness of a group counseling procedure has much in common with problems inherent in outcome research in psychotherapy. The important issues relate to control of variables which might covary with behavior change in order to "tease out" those changes which are a function of the treatment: in this case, the experience in the group (Frank, 1959; Parloff & Rubinstein, 1959; Strupp & Luborsky, 1962). Nevertheless, the majority of authors report that group procedures are effective in influencing behavior in a positive direction.

We might mention two critical issues. It has been pointed out and commonly noted that the motivation to improve—the person's recognition of a concern, a difficulty or a problem—can often stimulate his thinking in a constructive way about it so that this recognition can, on its own, be "therapeutic" in that it can lead to more effective behavior. Students who perceive their need for developmental work around their reading habits, study procedures, their resistive or unrealistic attitudes towards scholastic demands, may become more receptive to the utterances, advice and thoughts of others and may, via their increased motivation to improve, re-evaluate their position in such a manner as to constitute a substantial change in behavior. The treatment variable has to be effective, then, in light of the sources of motivation that are provided by the recognition of the problem alone and desire to improve.

Another relevant issue is students' tendency to improve without any expressed motivation or acceptance of the existence of a difficulty. A plot of grades for a random group of students over their undergraduate semesters indicates that, for a variety of reasons, their grades rise. A baseline control group is therefore essential to a well-controlled study. In effect, this research is concerned with the control of relevant motivational factors, with the aim of arriving at relatively unequivocal results.

Method and Procedure

We chose as our criterion for effectiveness the grade point average (gpa). It is held that the gpa earned during the semes-

ter in which the student is a member of the group, or the semester immediately following it (a criterion used in most of the investigations to date), is insufficient. Rather a better measure of the effectiveness of the shs is its effect, if any, over the total undergraduate stay.

Control Variables

Scholastic aptitude: The scores on the American Council on Education Psychological examination (ACE) for Ss in the various groups will act as controls for this variable (Ofman, 1963a).

Motivation: As was mentioned earlier, motivational factors must be controlled if unequivocal statements are to be made regarding treatment effectiveness. The control of motivational factors was accomplished by the selection of appropriate control groups which will now be described:

The Experimental Group consisted of the eight-semester gpa of a sample of Ss who volunteered for the shs and were accepted as participants. A number of Ss who volunteered for the shs had to be excused from participating on administrative grounds.¹ This group of excused volunteers—those who showed the desire to improve—served as the *Control Group* for motivation. Three other control groups were included. One group served as a *Baseline Control* and consisted of Ss, chosen at random, whose gpa was plotted for eight semesters at the university. Another group consisted of the gpa of Ss who volunteered for the shs and were accepted, but who dropped out from the shs before the third session. This *Dropout Group* permitted an evaluation of the shs in a quantitative fashion. The last group was in reality a subgroup of the motivation control, and constituted a *Wait Group*. It consisted of the

gpa of volunteers who were refused admission to the shs but who became participants in the seminar two semesters later. It is held that these five groups helped to control most of the contingencies of which improvement might be a function.

The Sample

Group A: Baseline Control. Gpa of 60 Ss,² randomly selected, over eight semesters.

Group B: Experimental Group. Eight-semester gpa of 60 volunteers who remained in the shs for at least 80% of its duration.

Group C: Dropout Group. Eight-semester gpa of 60 volunteers who dropped out before the fourth session and did not re-enter.

Group D: Control Group. Eight-semester gpa of 60 volunteers who were refused admission for administrative reasons and who did not enter the shs.

Group E: Wait Group. Eight-semester gpa of 60 volunteers who were refused admission for administrative reasons to the shs, but who re-entered and participated in the shs two semesters later.

Hypotheses

1. Volunteers should not differ from a random selection of students at the university in their initial grade point averages: gpa of Experimental Group is not different from gpa of the Baseline Group.
2. Scholastic aptitude as measured by the ACE should be comparable for the five groups.
3. The Experimental Group should show a significantly different pattern of grades during its eight semesters than the four other groups.
4. The Experimental Group will have higher gpa than the other groups in semesters following the shs.
5. Gpa of the Experimental Group will be higher than that of the Control Group over eight semesters.
6. Gpa of the Dropout Group will be higher than that of the Control Group over eight semesters.

¹Students came voluntarily to "sign up" for the seminar, and all who wished were allowed to sign into the seminar. About twice as many students signed up as accommodations permitted. When all the sections were filled, those who could not be accommodated were told that due to space limitations, the sections were closed. There is no reason to suspect that any systematic factor affected the choice of students who were excused because of space limitations.

²Since the numbers in the several groups varied naturally, and it was desirable to have equal numbers in all the groups, the total number in the smallest group (Dropout group $N = 60$) was taken as the standard and the other groups were reduced (their data cards shuffled and the first 60 chosen) to 60 each.

7. Gpa of the Wait Group will show significant difference in gpa before and after the experience.
8. Gpa of the Wait Group will, in semesters seven and eight, be comparable to that of the seventh and eighth semester gpa of the Experimental Group.

Results

The design of the experiment was such that it permitted the testing of differences among the curves of the Experimental, Baseline and Control Groups.

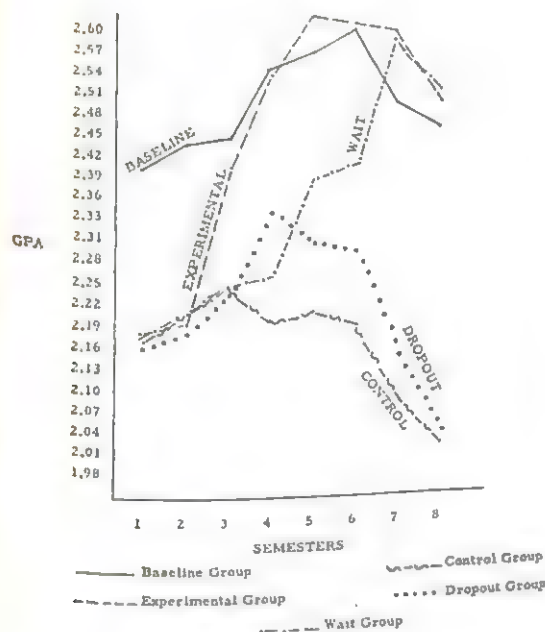


Fig. 1. A plot of the mean gpa per semester for Baseline, Experimental, Dropout, Control, and Wait Groups.

Figure 1 presents a graph of the curves of gpa for the different groups per semester for eight semesters. Volunteers participated in the shs in their first year. It will be noted that the Baseline Group began its career at a higher level than volunteers for the shs. The Control Group and the Dropout Group curves are essentially flat. The Experimental Group, on the other hand, began to improve its gpa in the second semester and by the fourth semester the curve of its gpa departs from that of

the Control and Dropout Groups and approaches that of the Baseline Group. The curve of the Wait Group is not different from that of the Control or Dropout Groups during the first four semesters, but it rises to join the curves of the Baseline and Experimental Groups in semesters seven and eight.

Table 1
Critical Ratios of Initial Semester Gpas

Groups	CR	Significance
Base.—Exp.	2.01	.05
Base.—Control	2.08	.05
Exp.—Control	1.01	N.S.

In evaluating hypothesis No. 1 (Table 1) it was found that there were significant differences between initial gpa of the Baseline Groups and that of the Experimental and Control Groups. There were no significant differences in the initial gpa among the volunteering groups. The initial gpa of the Experimental and Control Groups, while not significantly different from each other, are significantly lower than the gpa of the Baseline Group in the first semester of college.

Table 2
Summary of Analysis of Variance of ACE Scores for Baseline, Experimental, Dropout, Control and Wait Groups

Source	df	MS	F
Between Groups	4	192	0.362*
Within Groups	225	592.88	
Total	229		

*Not significant

Hypothesis No. 2 was upheld. (Table 2) Since an analysis of variance of ACE scores for the five groups yielded an insignificant F, it was concluded that scholastic aptitude was essentially comparable for the five groups. That is, while the volunteers for the shs began their academic career at a lower level of performance than the Baseline Group, they did not do so as a function of lower scholastic potential.

An analysis of variance of the gpas for each group per semester (Table 3) tested

hypothesis No. 3. The highly significant *F*s for Interaction and for Groups indicated that the curves of grades were neither proportional nor parallel. It was therefore asserted that the differential treatment had different effects upon the several groups.

Table 3

An Analysis of Variance of Gpas of Baseline, Experimental, Dropout, Control and Wait Groups for Eight Semesters

Source	df	SS	MS	F
Groups	4	35.68	8.920	5.304**
Semesters	7	10.48	1.497	
Interaction	28	51.28	1.830	4.800**
Within Cells	2360	815.22	0.345	
Total	2399	912.66		

**Significant at .01 level

In terms of hypothesis 4, the results indicated that the Experimental Group, while beginning significantly lower than the Baseline Group in gpa, did not improve to a degree which significantly superceded the gpa of the Baseline Group (Table 4). In effect, in the last semesters, the gpa of the Experimental Group and the Baseline Group are comparable. However, hypothesis No. 5 was upheld: the Experimental Group's gpa was significantly higher than the Control Group's and Dropout Group's gpa.

Table 4

Critical Ratios of Gpas, Semesters 2-8 of Baseline, Experimental, Dropout, Control and Wait Groups

Groups	C.R.	Sig.
Base.—Exp.	1.00	N.S.
Exp.—Drop.	2.508	.05
Exp.—Control	3.438	.01
Exp.—Wait	1.312	N.S.

Hypothesis 6 was not upheld. The Dropout Group evidently did not receive help from the four or fewer sessions of the shs in a manner sufficient to raise its gpa (Table 4). The gpa of the Dropout Group taken over the last seven semesters is comparable to that of the Control Group which did not participate in the shs at all.

Hypothesis 7 was upheld. The results (Table 5) indicated that the gpa of the Wait Group during its wait period—before

taking the shs—was significantly lower than its gpa in semesters after participation in the shs.

Table 5

Critical Ratios Between Gpa of Wait Group Before and After the SHS

Groups	Gpa	s.d.	C.R.	Sig.
Wait (before)	2.222	.533		
Wait (after)	2.478	.568	2.516	.05

Further, hypothesis 8 was supported: there was no significant difference in the last two semesters between the gpa of the Wait Group and that of the Experimental Group (Table 4).

Discussion

The findings indicated that those students who volunteered for the shs exhibited inappropriate performance in their first semester: their grades were significantly lower than those of the Baseline Group; but in the light of comparable ACE scores for all the groups, this was not a function of lower scholastic aptitude. It appears that those students who volunteered for the shs (it should be noted that they were not on probation at this point, nor had they been likely to have visited an academic counselor) perceived themselves correctly: they recognized their need for help, and this was a correct perception.

As a result of participation in group counseling, the Experimental Group's gpa became comparable to that of the Baseline Group's gpa and significantly higher than the gpa of the Control and Dropout Groups which, while comparable in other respects, were subjected to lesser amounts of the group counseling experience.

It might be interesting to note that the Experimental Group did not begin its improvement until the third semester. Evidently it takes some time before the results of the newly gained insights, as a result of the group counseling, are translated into action. This is one of the important reasons for the use of long-range rather than immediate criterion measures. Though some students do exhibit a "transference cure"

and exhibit immediate marked behavior changes, most of them seem to do better in the "long pull" as a result of the counseling experience.

The improvement of scholastic behavior on the part of the inappropriately performing (underachieving) Experimental Group cannot logically be accounted for by the natural tendency to regress towards the mean. The Control Group, Dropout Group and the Wait Group do not indicate this phenomenon. Therefore, the change in behavior on the part of the Experimental Group (and later the Wait Group) can only be accounted for in terms of our treatment variable.

Further findings lend support to the effectiveness of the shs in influencing gpa. The Dropout Group evidently did not receive help from its limited participation in the shs in a fashion sufficient to significantly raise its gpa. The gpa of the Dropout Group taken over the last seven semesters is essentially similar to that of the Control Group which did not participate in the seminar at all. This is a useful finding. It is often said that students tend to gain as much from the "inspiration" of being stimulated by an ameliorative experience as by the process and content of the procedure itself. This is not the case in this investigation. The first three sessions of the shs are of this introductory, somewhat inspirational nature. Characteristically, there is a discussion of the basic reasons for being at the university, the commonly shared need for higher-level work skills, the basic goals and values consistent with university achievement, and the relationship between the student's goals, the aims of the university, and the aspirations that the student's relatives and parents have for the student (Ofman, 1963b). The findings clearly indicate that such a process alone was not sufficient to significantly raise the Dropout Group's gpa. Evidently what is needed is, as McGowan (1962), put it, "... therapy plus content."

More light is shed on the motivational variable by an inspection of the gpa curve of the Wait Group. It will be recalled that this group is comparable in gpa, semester

of entry, and scholastic aptitude to that of the Experimental and Control Groups. The Wait Group was composed of Ss who volunteered for the shs, were refused admission and became participants two semesters hence. During the wait period, this group exhibits a curve of grades essentially similar to that of the Control Group. No improvement was exhibited during the wait period. After participating in the shs, however, its gpa became significantly different from that of the before period, and from the Control Group's gpa. In the last semester it becomes comparable to that of the Experimental and Baseline Groups. The implications of this finding lend further support to the fact that motivation to improve alone is not sufficient to change the scholastic performance of students who indicate a desire to change. This finding also sheds light on the "when is it too late?" question. Apparently students who are motivated to improve, if given the appropriate treatment, can improve rapidly—it took the Wait Group approximately two semesters to improve to a level comparable to that of the Experimental Group.

As a result, we can state with a high degree of certainty that in the findings of an investigation which concerned itself with long-range results, and which controlled ability and motivational variables, indicated that students of comparable ability who began their scholastic career with inappropriately lower grades, who recognized and expressed their need for help, and participated in group counseling were indeed aided to perform in a manner more consistent with their ability. In contrast, those Ss who were in the same circumstance, but were refused help, or dropped out of the group, continued to perform in a consistently inappropriate manner: they did not improve their grades even though they were motivated to do so.

The outcome of this investigation supports the results of many studies of the effectiveness of group procedures in academic settings. The critical issue to which this research was addressed was the establishment of controls and the manipulation of variables in a manner which was con-

sistent with conclusions of an unequivocal nature—an aim which former studies accomplished only in small part. It dealt with, at once, a group procedure which focused on personality variables and scholastic skills simultaneously. It provided control for motivational variables, and it used an objective criterion for measurement over a prolonged period of time.

In the light of the design, the findings indicated that such group counseling procedures which take into account the whole person are effective in changing scholastic behavior in a positive direction.

Summary

The effectiveness of a group counseling procedure concerned with students' adjustment to the university which dealt simultaneously with issues related to attitudinal, motivational and specific skills, was assessed in terms of its influence on the gpa of five groups of 60 students. These groups consisted of a Baseline Group of randomly chosen Ss, an Experimental Group of volunteers who participated in the seminar, a Control Group of volunteers who were refused admission to the seminar, a Dropout Group of Ss who participated in the seminar for less than three sessions, and a Wait Group of volunteers who were refused admission but who became participants two semesters later.

The grade point averages for each of these groups was plotted for each of their eight semesters.

The results indicated that students volunteering for the seminar, while comparable to the Baseline Group in scholastic aptitude, were significantly lower than the Baseline in first semester grades. As a function of group counseling, the Experimental Group improved its grades to a level comparable to that of the Baseline Group, and significantly above that of the Control and Dropout Groups. The Wait Group remained static during its wait period, but as a result of the subsequent counseling, improved its gpa to a level not different from the Experimental or Baseline Groups. Gpas did not improve for the Control and Dropout Groups.

It was concluded that the Study Habits Seminar as a group counseling procedure was effective in improving scholastic performance.

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Comments

This study is an evaluation of the effectiveness of group counseling in bringing about change in college students' attitudes toward studying as reflected in the cumulative grade point average over eight semesters.

It is generally believed by those in the how-to-study field that the desire to improve is an important ingredient in the development of better study habits and the hoped for consequence, better grades. The desire to improve is a necessary but not a sufficient condition for improvement.

It is also generally believed that the over-all trend of grades across four college years is upward on the average. Hence, it confuses the picture in this study for the so-called control group and baseline control group to show precipitous drops in grade point average in the last three semesters. The control of motivation is maintained by the division of the population into a "wait" group and group refused admission for administrative reasons.

The study is sufficiently complex in design that one needs to pay particularly careful attention to the statistical manipulations. A single table of means and standard deviation would have been helpful but it is not provided. Also, a more detailed

description and justification of the analysis of variance model used would be very helpful to those readers who might question the statistical assumptions. Questions entering my mind are why reduce the sample size to 60? And why not adapt the statistics to the data rather than cutting samples to fit a preconceived design?

The statistical design for this type of study appears to the reviewer to be more appropriately an analysis of covariance which makes it possible to statistically account for the effects of the variables thought to be operating in this situation. Analysis of covariance is indicated because we have in this study the joint variation of several variates and the real question is whether the dependent variate (in this case gpa) is due to the nature of the distribution of the variate or whether it is due to the dependent variate's dependence on the other variates which themselves vary.

The study does provide more data to bolster the belief that group counseling does have some value in developing motivation toward college work.

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Grade Patterns of Counseled and Non-counseled College Students

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An investigation of grade patterns was made for 38 counseled and 38 matched non-counseled students. Grades for two terms before counseling started, during the first term of intensive counseling, and two terms after counseling began were examined. No significant difference was found in average grades of the counseled and non-counseled groups when compared term by term. However, when the counseled group was divided into those whose grades dropped during counseling (20) and those whose grades increased (13) (the grades of 5 stayed the same), it was observed clinically that there were similarities in personality factors peculiar to each grade pattern group.

Counseling psychologists working with college students are repeatedly confronted with student complaints of impaired intellectual functioning such as: inability to concentrate, anxiety over examinations, and difficulty in maintaining adequate grades (Blaine & McArthur, 1961; Farnsworth, 1962; Richardson, 1961; and Roessler & Roberts, 1958). Administrators and faculty expect a counseling service to justify itself in part by helping students achieve better academic performance (Ivey, 1962).

Problem

This study is concerned with three hypotheses: (a) grade patterns of most college students gradually improve during their college career; (b) grade patterns of counseled college students may differ from grade patterns of non-counseled students; and (c) counseled students may experience a drop in grades the term that intensive counseling begins.

Procedure

All the students in this study attended the Bernard M. Baruch School of Business and Public Administration of The City Col-

lege, New York. A random sample, every fifth person on the list of Baruch School graduates for 1961, of 46 non-counseled students was selected for purposes of observing grade patterns during their four year college career.

Thirty-eight students, seen ten times or more by two counseling psychologists, were matched with 38 non-counseled students for year of entry to college, sex, type of high school attended (academic, commercial, or science), and composite score.² Only those counseled students who had been in college one or two terms before, and one or two terms after intensive counseling began, were included in the experimental group.

To check whether some of the subjects in the control and graduate groups had been in therapy during their college years, letters were sent inquiring if they had been seen ten times or more by a social worker, psychologist, psychiatrist, or psychoanalyst. Second and third letters were sent to those not responding. Thirty-nine of the 46 graduates responded, three being eliminated

¹This research was supported by the Faculty Research Committee of The City College.

²Composite score is computed by giving 50 per cent weight to the high school average and the other half is divided equally between the verbal and the mathematics parts of the SAT.

from the study because of having received therapy. Thirty-one out of 38 in the control group responded and none had been in therapy.

The college index was calculated for each of the terms the graduates were in college.³ It was calculated for the experimental group for one or two terms before counseling began, the term it began, and one or two terms subsequent. The index for those in the control group was calculated for the terms corresponding to those of their counseled partners. For example, a student may have begun counseling in his fourth term. His and his partner's indices were determined for their second, third, fourth, fifth, and sixth terms. Mean indices for the two groups were calculated and a *t* test made for significant differences of grades for each of the five terms.

Results and Discussion

Hypothesis A

An examination of the profile of grades for graduates in Figure 1 indicates that the typical student who graduates starts off in college with about average grades and gradually increases them throughout his college career. The change from semester one to semester eight is significant at the .01 level.

While the changes between consecutive semesters were not statistically significant, the following might be factors in such changes. The drop in average in the fifth term may have been due to their having begun intensive work on their major or to a let-down after the basic courses were completed. A similar finding occurred in a study of Hampton Institute graduates (Fisher, 1961). The spurt in grades in the upper senior year may be due to three main factors. (a) Some students enter their last term with grades too low for graduation. Increased effort may raise grades be-

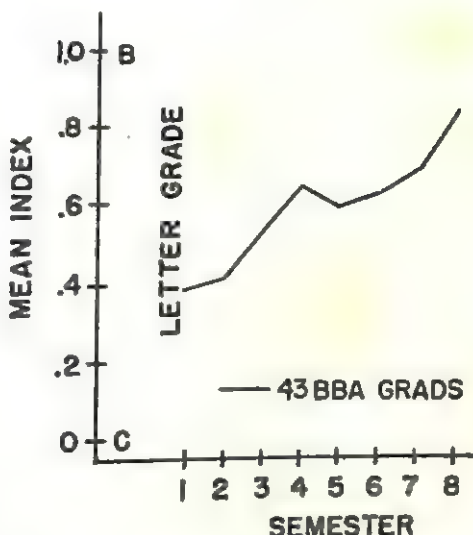


Fig. 1. Mean college indices for 43 graduates.

yond the necessary point for graduation. (b) Those desiring to attend graduate school will frequently expend more effort their last term. (c) Added interest in their major field motivates some to work harder their final term.

Hypothesis B

The second hypothesis was not substantiated. There were no significant differences in grade patterns of the 38 counseled and non-counseled students when compared term by term as shown in Figure 2. The

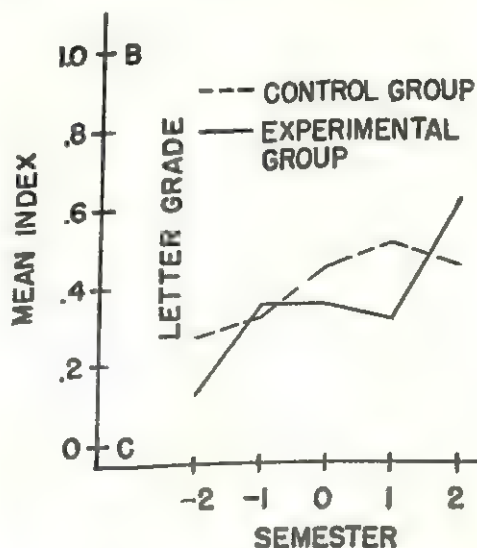


Fig. 2. Grade patterns of 38 counseled and 38 non-counseled students.

³The grade of A = +2 points for each credit in a course, B = +1, C = 0, D = -1, F = -2. The college index is calculated by determining the number of credits and the + or - points earned in a term. Then the number of credits is divided by the number of + or - points. For example, if a student has +8 points on 16 credits, the index would be +.50.

term when intensive counseling began is indicated by 0 on the horizontal axis. Two terms prior to and after counseling began are indicated by -2 and 2. One term prior to and after counseling are indicated by -1 and 1. Not every term includes a full quota of 38 subjects. There were 36 in the second term before counseling and 35 in the second term after counseling began. Kaess & Long (1954) also found no significant differences in grades of 79 counseled and non-counseled veterans.

Hypothesis C

Since Hypothesis B was not substantiated, then Hypothesis C, that there would be a statistically significant drop in grades the term that intensive counseling began, was not substantiated either. However, when the counseled students were divided into three groups: (a) those whose grades dropped during counseling (20), (b) those whose grades rose during counseling (13), and (c) those whose grades remained about the same (5), and their personality characteristics were discussed with professional colleagues in the Division of Counseling and Testing, the pooled clinical judgments indicated that certain differing personality clusters might be present in these groups which would be productive if followed up in further research.

The 20 counseled students who showed a drop in grades the term intensive counseling began tended to be those who were having emotional difficulties which interfered with their doing college work effectively. This was a strong factor that motivated them to seek help. They were demonstrating their problems by quarreling with family members; alienating themselves from their peers by negative behavior; experimenting with drugs, alcohol, and sex; and devoting themselves to the pursuit of pleasure in general.

The 13 students who showed rising grades the term counseling began seemed to be those who needed someone to be interested in them and to understand their difficulties. They were seldom resourceful, were under-active socially yet craved to

belong. They were bland, dependent, and constricted. Finding a psychologist who would help them to establish meaningful relationships and to become more independent and resourceful reduced their anxieties so that college work could be carried on more comfortably.

The number of students whose grade pattern showed almost no change were so few (5), that clinical observation seems unsafe at this time.

There is a relationship in the findings in this study to those of Heath (1959). The students whose grades dropped the first term of counseling had similar needs and behavior to the Princeton students in Heath's Z group. Those whose grades rose were similar to the students in Heath's X group.

An illustrative case of the students whose grades dropped is a girl who was doing well scholastically at first but became unmotivated, lacking in confidence, and was having somatic difficulties. She worked intensively on her problems concerning her mother and sister and on relationships with boys. Her grades dropped considerably for two terms and the pattern for the remainder of her college career was almost identical with her emotional growth. When she began to be successful in handling her personal problems, her grades began to rise. Farnsworth (1962, p. 79) indicates, "If emotional development is facilitated, intellectual development will increase; if true intellectual development is facilitated, emotional development will increase."

A case illustrating the students who had rising grades the term counseling began is a young man who came ostensibly to discuss his academic objective. He was living with his mother and step-father whom he found difficult to accept. He also had trouble about his relationship with his own father whom he saw occasionally. One or two questions about his feelings brought tears. He had many feelings of sadness, rejection, and hostility. The counseling helped him work through his complicated relationships and at the same time he increased his grades.

Limitations and Implications

The personality factors were not measured by tests but were clinically assessed by the two counseling psychologists. The study would have been strengthened had there been personality tests. Another limitation concerns the fact that although most of the subjects in the control group had

not been in therapy, this does not preclude the possibility that some of them may have had handicapping emotional problems. Finally, a larger number of cases would be helpful in determining further significant differences.

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Case Report: On the Meaning of Symptoms

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In this case report, a young woman troubled by what appeared to be a simple, motoric "bad habit" was treated using hypnosis. The habit turned out to be neither *bad* nor *habitual*. The problem was resolved not by changing the habit (symptom), but by allowing the habit to change the client. This case illustrates the value in a new look at the meaning of symptoms.

The use of hypnosis in clinical work has had a measure of renaissance in recent years. Quite likely this is due more to disillusionment with conventional interview therapy than to new found powers in the application of hypnosis. Since Freud adopted "free association" in its stead, hypnosis has been viewed as a technique for symptomatic relief and/or an alternate route for revealing hitherto repressed material. Freud (1950) objected to hypnosis as a symptom remover because it failed to eliminate underlying anxiety which would eventually produce new symptoms. Others (Eysenck, 1960; Phillips, 1956; Wolpe, 1958) have been less willing to view the person's problem as a matter separate from his symptoms and have held that symptom relief is tantamount to cure. Greenspoon (1961) holds that the behavioristic psychotherapist views the patient's psychopathology and his symptoms as one and the same. What is true both of Freudian and of most contrasting views, however, is the principle that symptoms, in any case, are maladjustive, onerous, and to be removed. Analysts have merely held that the best way to remove symptoms permanently is to remove the *underlying* problem (anxiety). Those who dispute this "depth" assumption assert that to remove the symptom *solves* the problem.

The following is a report of a case which by its nature seemed particularly informative, not about the "depth" issue, but about the more fundamental assumption that symptoms are, if you will, "bad" or mal-

adjustive. This young college woman, as will be made evident, had certainly only a "symptomatic" problem at most. She was bothered by a single, unique, essentially motoric, but altogether irksome habit of which she wanted wholeheartedly to be rid. This consisted of movement of the upper body at early morning hours so vigorous as to awaken her dormitory roommates.

Initial Assessment

Miss Y was seen by one of us (HAP) in an intake interview. An attractive girl in her junior year, Miss Y was doing well in school, active in clubs, and knew of no personal or social problems which might contribute to or energize her habit. She had apparently engaged in the habit for some years before college, but whereas it was ignored at home, it had annoyed roommates, and she was now embarrassed by the matter. The only relevant statement she had about the bed shaking was the fact she had been a crib "walker" as an infant and small child, according to her parents' report.

In the past she had tried auto-suggestion prior to retiring with only modest success. It was suggested to her that hypnosis might more effectively remove the habit than would auto-suggestion if she were willing to try. She expressed interest and was referred to the clinician-hypnotist (VEB).

This case was discussed at a staff meeting. It was agreed that the major likelihood was that no very profound or hidden mo-

tivation existed although there was some speculation that Miss Y's concern with "bed shaking" could signify a possible sexual problem. It was decided that hypnosis would be employed but first to explore and plumb for a possible pocket of hidden conflict; thereafter, in case no "depth" dynamics were revealed, to remove the offending habit or symptom.

Treatment Contacts

Miss Y was seen five times by the hypnotist over a one month period, as summarized below:

1. Hypnotist and subject talked about the goals of their contact. It was explained that the first steps were exploratory and the venture was at this point rather experimental. Miss Y noted her complete willingness to enter into a trance. She volunteered that she often had vivid dreams filled with much activity which could contribute to the symptom. She also advanced her own idea that the rocking movements were used to *preserve* sleep. She denied, however, that she had to arise to void or that bladder sensitivity was related to the problem.

After some general observations about hypnosis, induction was begun and Miss Y proceeded to a medium level trance showing eye catelepsy, muscular rigidity, thermal and tactual hallucinations.

2. After a brief initial discussion of her experiences with the trance the previous time, induction was begun. Miss Y was unusually slow at first, but did succeed ultimately in entering a trance of the deepest nature accompanied by positive and negative visual hallucinations, auditory hallucinations, and post-hypnotic amnesia. She revealed while in the trance two pertinent pieces of knowledge: (a) she is anxious when rocking, and (b) she "knows" when she rocks. By "knowing" she apparently meant that the experience had phenomenally some elements of reflective awareness.

3. Miss Y went quickly into a deep trance with no recurrence of the slowness seen at the second meeting. She revealed that

the rocking occurred least often when she was very tired, that it occurred usually around 5:00 A.M., but sometimes later depending on when she retired. She was told that she was asleep, and the time was approaching 5:00 A.M. The hypnotist started at 4:30 and moved closer to 5:00 by five minute steps. At 4:55 Miss Y began to move her head slightly. This movement increased in magnitude at 5:00, but was unaccompanied by any other acts. The hypnotist then directly suggested that she rock or move in every way that she had done in the past. The head shaking ("negating") movements were slightly enhanced, but no other behavior was observed. The time was then moved to 6:00 by five-minute steps; the movement ceased at 5:15.

Miss Y was questioned. She said the movement made her feel bad, and she had been reluctant to reproduce it. The time was returned to 5:00 A.M.; the movements were again promptly reinstated. Miss Y was told that the hypnotist was placing a special kind of tape on her forehead which would restrain her head shaking but would not keep her from turning over or other such postural adjustments. After touching her forehead and repeating these instructions, it was observed that the movement stopped. She was unable upon questioning to shake her head even when she tried. Thereafter, it was suggested that the tape would remain; it would work only when she slept, and it would restrain any further head shaking. She had no memory for these events following emergence from the trance.

4. Miss Y reported that in the week since the last contact she had had fewer incidences of head shaking than at previous times, but there had, nonetheless, been two occasions when they had returned. On one occasion she had set a clock, awakened to its ring, turned it off, and resumed her sleep. After that she had experienced the head shaking. On a second occasion, she awoke to the movements, turned on her side and resumed sleep. She does not recall having done the latter on any previous experience.

At this point the hypnotist decided to forego hypnosis and to consider through discussion with Miss Y the possible significance of her symptom. Miss Y made a number of pertinent observations. She noted that when she was a sophomore in high school, her parents wakened her regularly at 5:00 A.M. as her father had to leave early for work during that period. For about a year, she enjoyed being up early and felt she accomplished a great deal. She noted that she was an only child and conceded that she had, on the one hand, been often indulged, but also, her parents held for her high standards of accomplishment and work which she shared.

The clinician then hypothesized that the head shaking was evidence of a conflict between tendencies to indulge (in sleep) and promptings to get up, get to work (as had her father). Miss Y then opined that the head shaking was most likely to occur when she had been guilty of slighting her school work for her extracurricular interests. She also believed that the movements always occurred after her essential need for sleep had been satisfied.

Miss Y was then hypnotized and asked if she wanted to have the "tape" suggestion repeated or strengthened. She said she did not. The hypnotist then suggested that she would avoid the conditions which precipitated her head movements by attending to those obligations first which she valued first. Secondly, it was suggested that should the head movements start, she would awaken immediately, arise feeling alert and fresh, and attend directly to whatever she felt she had slighted before retiring. When asked if this suggestion pleased her better than the earlier (tape) suggestion, Miss Y emphatically affirmed. Thereafter, she was awakened from the trance, and she volunteered that she felt quite optimistic.

5. On this contact, nine days later, Miss Y reported that no head shaking had occurred. She did wake early on several mornings very alert, energetic and active which she noted as unusual.

After being hypnotized Miss Y discussed her head shaking. She felt quite assured

that its significance was clear and that she could now deal with the matter herself. Asked whether she wanted to remain amnesic for the post-hypnotic suggestions, she answered in the negative. Rather, she felt she should and could deal with the habit consciously on her own terms without further aid.

She was told to dream during the period she emerged from the trance. She reported she dreamed she was asleep, woke up, hopped out of bed, shut off the clock, and grabbed a chemistry book. She laughed at the dream and discussed with the hypnotist the *usefulness* of her symptom. She did not feel further contacts were necessary but agreed to come in some time next quarter to report how things were progressing.

Follow-up: Two and one-half months later, at the suggestion of the hypnotist, Miss Y dropped in to discuss her progress. No head shaking had occurred in the interval. She was quite busy with one of her club activities, having been elected an officer. She expressed complete satisfaction with the course and outcome of her contacts.

Conclusion

It seems clear that instead of Miss Y removing or altering her symptom, with the help of hypnotic suggestion, the *symptom altered Miss Y, removing certain lingering self-indulgences* carried over from an earlier time. Her immaturities were in truth rather innocent, but no less troublesome for that to this person of unusually high energy and zestful ambition. To have pursued the widespread thesis that her symptom was *bad*, maladjustive, and thus, expendable, would have been fraught with doubtful success. And even had we succeeded in interfering with or removing via hypnosis the head shaking, what would have happened to the discontent and frustrated responsibility which was motivating this behavior? In contact 4, the suggestion is that Miss Y's sleep might have suffered some other, closely related forms of interruption. We are inclined to believe this girl's character was too strong to allow its minor but persistent frustration to go "un-

noticed." Indeed, the symptom was her manner of serving *notice* on herself to "get up, get busy and change."¹ When she capitulated to the demand "voiced" in the symptom, she felt optimistic, capable of resolving her own problems, and free of the symptom.

We feel that in this case the symptom is more effectively construed as an index of personal strength and a resource for change rather than a weakness to be summarily removed. We question both "depth" and "non-depth" approaches insofar as this distinction orders itself along a continuum whose poles are "to-remove-anxiety" versus "to-remove-symptom." The more fundamental question here was "to-remove (anxiety or symptom)" versus "to-change, -mature, -be-responsible." It is true the symptom did disappear, but not by being removed. We feel confident that if Miss Y were to return to her old haunts of procrastination and self-indulgence, whether minor or se-

rious in degree, her symptom would be right back on the job.

This case had initially all the signs of being readily responsive to a program of symptom removal via hypnotic suggestion. If this kind of program proved less than adequate even in this instance, we are privileged to ask whether it would be applicable in any case. Miss Y seems to us to illustrate the need for a more flexible if not a new look at the meaning of symptoms.

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¹We are inclined to interpret the head shaking not as a negation of promptings to wake, but rather as a rejection of tendencies to continue sleeping.

The Meaning of a College Education as Revealed by the Semantic Differential¹

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On the basis of previous local studies a characterization of Kansas State University students was formulated. Hypotheses were derived about the meaning of college education for our students and were tested using the semantic differential. Students see the university and their parents as benign, powerful figures and acquiring a college education is seen by them as becoming more similar to these figures and acquiring greater self-esteem and a feeling of personal power. Not acquiring an education is perceived as being quite a deflating experience—there is clear evidence that the student would expect this to be an experience damaging to his self worth and feeling of effectiveness.

For the past decade there has been a continuous program of research at Kansas State University oriented toward the description of its students. Although most of this work has been done using objective tests, biographic and demographic data also have been gathered (Danskin, Kennedy, & Stone, 1962; and Stone, Kennedy, & Danskin, 1963). Certain congruities among the various approaches in conjunction with a "case-history type" integration of findings have lead to the construction of a hypothetical modal student.

Our typical student comes to us from a rural or very small community. His parents have had a strong influence in his choice of college and his major. His image of the university as an incoming student as revealed by questionnaire data is one of a powerful, likeable, benign institution that is attractive to attend. One cannot help but be impressed by the similarity of student views of parent and institution. By comparison with both, the student ap-

pears to see himself as less highly valued and less powerful. It appears that he comes to college in order to become more highly valued and more powerful in the way that his parents and the institution are to him. He tends to be rather naive and dependent, and he is overly optimistic in his grade predictions (Stone, 1962). His attitude toward education is that it is to be dispensed authoritatively rather than achieved by active participation. He is "practical" and vocationally oriented.

Recognizing the tentative quality of our characterization we decided to attempt to test some of the hypotheses implicit in our thinking about our students.

The first two factors of the semantic differential (evaluation and potency) seemed ideally suited for our purposes and the hypotheses have been formulated in terms of these measures. The evaluation factor comprises the "good-bad" dimension of the meaning of concepts; and the potency factor, the "weak-strong" dimension of meaning.

The concepts to be used in formulating and testing our experimental hypotheses are: Mother, Father, Kansas State Univer-

¹This paper was presented at the Kansas Psychological Association, April 1962. Acknowledgment is made to Robert E. Cox for assistance in computation of the data.

sity (KSU), Self, "Self as adult with college education," and "Self as adult without college education," Street and Illness.

The concept "Self as adult without college education" is included as a control measure for comparison with "Self" and "Self as adult with college education" to ascertain whether effects of age and maturation alone account for increases on the potency and evaluation factors.

Two reference concepts are included for comparison: "Street," which was anticipated as being near the origin of the potency and evaluation dimensions ("meaningless"), and "Illness," which was expected to be in the "bad-weak" quadrant (i.e., low on both the evaluation and potency dimensions).

The hypothesis of the study is that there is a partial order among the concepts on both the evaluation and potency dimensions of the semantic differential. From high to low this order is as follows: Mother, Father and KSU (all three tied); Self as adult with college education, Self as adult without college education, Self, Street and Illness.

Procedure

The subjects were 46 females and 52 males who were volunteers from a general psychology course. Most of them were Freshmen or Sophomores.

The form of the semantic differential employed in this study is described in Osgood and Luria (1954).

Each subject rated eight concepts (Self, Mother, Father, KSU, Self as adult with college education, Self as adult without college education, Street, Illness) on ten dimensions of the semantic differential.

Results

Since no predictions were made for the activity factor only the data for the evaluation and potency factors were analyzed.

The hypothesis of a partial order among concepts on both the evaluation and potency factors was evaluated using Lubin's K (1961). K is a special case of Kendall's W coefficient. Whereas W is a linear function of the average Spearman rank-order

intercorrelation of m rankings with one another, K is the average correlation of m rankings with a *hypothetical* rank order. Thus, K is especially appropriate to the task at hand, which is to compare the obtained rank orders with the predicted rank order rather than to ascertain whether there is *any* order among the sets of ranks.

$$K = 1 - \frac{6J}{m(n^3 - n)}$$

where J is the sum of the m sums of the squared deviations between the observed rankings of the n scores for each subject and the hypothetical ranking of the n scores.

The obtained values of K on the evaluation factor data were .64 for males and .61 for females. The values of K on the potency factor were .30 for males and .47 for females. These results are all significant beyond the .0001 level of significance. There were many ties in our data, and the computation of the correction for ties for K is quite laborious. For this reason we calculated Kendall's W corrected for ties on these data, and found only a negligible change (in no case exceeding .02). Introducing a correction of this size in no instance appreciably changes the magnitude or statistical significance of our findings.

There was a very high relationship between the ranks of the means of concepts for males and the ranks of the means of concepts for females. On the evaluation factor ρ was .95 ($P < .01$); on the potency factor ρ was .93 ($P < .01$). Thus, the sexes were highly consistent in their ratings of the concepts used in this study. Because of the high magnitude of agreement, the sexes were combined for the graphic presentation of findings (Fig. 1).

A more refined analysis of the critical comparisons outlined in the hypotheses was undertaken by means of the sign test. For the evaluation factor (Table 1) all but two comparisons for both sexes were in the predicted direction and only one of these differences failed to reach statistical significance. KSU, Father, Mother and Self with college were higher on the evaluation

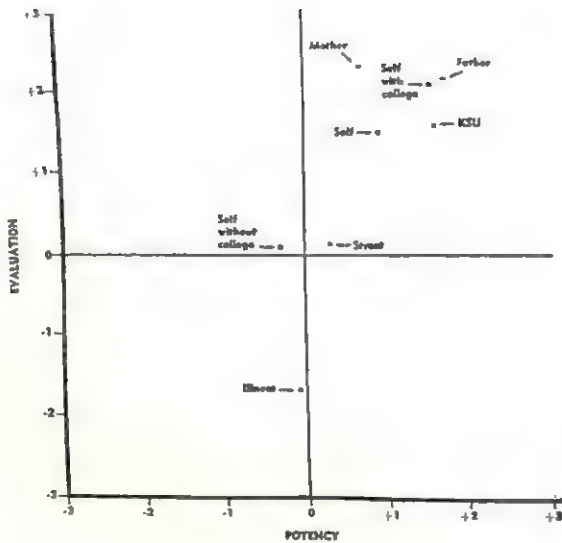


Fig. 1. Weighted means of concepts on evaluative and potency factors for both sexes combined.

factor than Self. For Self without college the results were quite unanticipated. For both sexes the relationship was in the direction opposite to that predicted and of considerable magnitude (C.R. for males, -4.33 ; C.R. for females, -4.90). The consistency of this relationship for both sexes suggests that for subjects enrolled in college, becoming an adult without a college education would result in a lowered valuation of self.

The sign test analyses on the potency factor data (Table 2) yielded significant results in the predicted direction for the comparison of Self vs. KSU, Father and Self with college. KSU, Father and Self with college were judged as more powerful than Self. For Self vs. Mother, the results were in the predicted direction but nonsignificant for females and the results

Table 1
Sign Test^a Comparisons of Ratings on Evaluation Factor for "Self" and Other Concepts

Concepts Compared	Females					Males				
	+	-	O	C.R.	P ^b	+	-	O	C.R.	P ^b
Self vs. KSU	22	20	4	0.31	n.s.	29	13	10	2.47	<.01
Self vs. Father	31	7	8	3.90	<.0001	36	10	6	3.83	<.0001
Self vs. Mother	30	7	9	3.78	<.0001	44	4	4	5.78	<.0001
Self vs. Self with College	31	5	10	4.33	<.0001	37	6	9	4.73	<.0001
Self vs. Self without College	6	33	7	-4.33	n.s.	8	43	1	-4.90	n.s.

^a"+" indicates difference in predicted direction; "-" in opposite direction.
^bOne-tailed tests.

Table 2
Sign Test^a Comparisons of Ratings on Potency Factor for "Self" and Other Concepts

Concepts Compared	Females					Males				
	+	-	O	C.R.	P ^b	+	-	O	C.R.	P ^b
Self vs. KSU	37	9	0	4.13	<.0001	32	17	3	2.14	<.02
Self vs. Father	41	4	1	5.52	<.0001	31	14	7	2.54	<.01
Self vs. Mother	20	18	8	0.32	n.s.	16	32	4	-2.31	n.s.
Self vs. Self with College	34	5	7	4.65	<.0001	33	10	9	3.51	<.001
Self vs. Self without College	10	29	7	-3.04	n.s.	7	36	9	-4.42	n.s.

^a"+" indicates difference in predicted direction; "-" in opposite direction.
^bOne-tailed tests.

were in a direction opposite to that predicted for males. For Self vs. Self as adult without college, the relationships were strong but opposite to the predicted direction (C.R. for females, -3.04; C.R. for males, -4.42). Inasmuch as both sexes were consistent in form of relationship it seems that the Self as adult without college is seen as decidedly weaker than Self.

Discussion

In general, with a few conspicuous exceptions, the hypothesis of the study was supported. Mother, Father and KSU were higher on the evaluation factor than Self. Self as adult with college education moves toward KSU, Father and Mother on the evaluation dimension. Thus the experience of becoming a college-educated adult is seen by students as one of becoming more highly valued by one's self. Except for the comparison of Self with Mother a similar relationship obtains with the potency factor; becoming a college-educated person is seen as increasing one's power.

The most surprising finding of the study lies in the comparison of Self vs. Self as adult without college. For both sexes on both factors the relationships were strong and in the direction opposite to that which had been predicted. Initially the concept Self as adult without college education was included as a control concept so that the effect of projected aging and maturation on the evaluation and potency ratings could be taken into account. It had been anticipated that becoming an adult irrespective of education would result in higher evaluation of one's self and a greater feeling of power. The results, however, indicate that for college students seeing one's self as an adult without a college education results in a significantly lowered evaluation of self and a decline in one's feeling of strength or power.

At this point in our investigation, it is, of course, an open question as to whether our findings are applicable to college students in general, or restricted in generality to land-grant institutions similar to ours.

The findings of this study may help clarify why many students who must leave college (for whatever reason: health, personal problems, low achievement, etc.) find difficulty in the rational consideration of an alternative training program or career. Abandoning, even temporarily, the goal of becoming a college-educated adult appears to be a threat to one's self-esteem and feeling of power. Thus, helping the student deal with these feelings of threat and failure is an integral part of the process of counseling him in the choice of a realistic goal.

The congruence between students' views of the university and their views of their parents may have implications concerning the way students relate to us as counselors or teachers, since we are usually considered as representatives of the university. In the case of our students, we may generally anticipate being seen as benevolent, powerful authority figures.

Does a similar view of "Self as adult without college education" obtain for those students who do not plan to go beyond high school? Or, does having committed one's self to an occupation without this requirement result in a different evaluation of one's self?

There seems to be a subgroup of dissatisfied older adults who seek vocational counseling concerning the feasibility of a "second career" which involves lengthy higher education. Interview impressions lead one to believe that these clients may be looking for some means to enhance their self-esteem and to compensate for feelings of dissatisfaction. One might speculate that the structure of their values and evaluation of self is similar to that seen among our students.

Summary and Conclusions

On the basis of previous local studies a characterization of our students was formulated. From this characterization as well as from a synthesis of earlier findings, hypotheses about the meaning of college education for our students were gen-

erated and tested using the semantic differential.

Students see our university and their parents as benign, powerful figures and acquiring a college education is seen by them as becoming more similar to these figures and acquiring greater self-esteem and a feeling of personal power. Not acquiring an education is perceived as being quite a deflating experience—there is clear evidence that the student would expect this to be an experience damaging to his self-worth and feeling of effectiveness.

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A Factor Analysis of the California Psychological Inventory on a High School Population¹

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The California Psychological Inventory was administered to a sample of 226 boys enrolled in the final month of their junior year or early months of their senior year in six New Jersey high schools. A matrix of intercorrelations of the eighteen CPI scales had a centroid factor analysis applied following which five extracted factors were rotated. The composition of these factors was discussed and the findings related to those of earlier factor analyses, a study in progress, and to two other analyses conducted by the writers. The available research consistently indicates that the CPI contains two major factors which appear to represent different dimensions of social desirability; the one almost the social stereotype of the well-adjusted individual, the other the more gregarious, achievement-oriented individual. The need to reconsider the scales and their groupings, with reduction in the number of scales, and the need for factor analysis on an item level are suggested. Implications of the findings for the counselor are discussed.

The California Psychological Inventory (CPI) developed by Gough (1957) is organized into eighteen scales measuring personality characteristics which "are related to the favorable and positive aspects of personality" (1957, p. 7). Gough has classified the CPI scales into measures of poise, ascendancy and self-assurance; measures of socialization, maturity, and responsibility; measures of achievement potential and intellectual efficiency; and measures of intellectual and interest modes. According to the test author the four classes "emphasize some of the psychological and psychometric clusterings which exist among them" (1957, p. 7).

Mitchell and Pierce-Jones (1960) reported a factor analytic study motivated

partly by difficulties in comprehending CPI profiles based upon the eighteen scales. The investigators identified four orthogonal factors from the analysis of CPI intercorrelations from inventories of 213 females and 45 males enrolled for study in a teacher training curriculum at the University of Texas. Personal communication with Mitchell further identified the subjects as predominantly college sophomores, a majority of whom were prospective secondary school teachers. All were enrolled in a required course in educational psychology at the time the CPI was administered. The four factors were tentatively named: I. Adjustment by Social Conformity, II. Social Poise or Extroversion, III. Super Ego-Strength and IV. Capacity for Independent Thought. One interpretation of the finding by Mitchell and his co-investigator is that the CPI scales represent fewer

¹The writers wish to express appreciation for the assistance of Catherine S. Henderson.

dimensions than are suggested by the presence of eighteen scales. Mitchell and Pierce-Jones suggested four scale groupings different from those proposed by Gough.

Crites, Bechtoldt, Goodstein and Heilbrun (1961) have also conducted a factor analytic study of the CPI in which they sought to test Gough's groupings against factor analytically derived clusters. The investigators sought also to reduce the number of scales to a more economical yet more efficient set, and to evaluate the extent to which the CPI assesses different aspects of a normal personality. The 372 male and female subjects were divided into three groups; one of university counseling center clients seeking aid for personal problems, another of counseling clients with vocational and educational problems and a control group of students in sophomore and junior level psychology courses. The findings, based on factor analytic studies of the three groups described above, supported only two of the scale groupings proposed by Gough. The Dominance scale was clearly representative of the Class I scales. The Well-being scale was most closely related to the Class II scales which were best defined by the Good Impression scale. The Communality scale, while distinct, was also closely related to the Class II measures. The Intellectual Efficiency scale of Class III correlated highly with the other scales in this group, Achievement via Conformance and Achievement via Independence, but also related well to most of the other CPI scales. The fourth class of scales was found to be composed of two relatively specific factors measured by the Flexibility and Femininity scales. These scales were noted to have little relationship to each other or to other scales. The investigators concluded that the findings supported two of the clusterings proposed by Gough. Further suggested was the use of six reference scales as less time consuming and less ambiguous measures of the CPI variables and the normal personality.

In a personal communication from Gough he has indicated that four factor analyses

were conducted prior to publication of the instrument and before the designing of the profile sheet. Gough based his first two scale groupings on the results of these studies. Factorial composition was not employed in the groupings of the third scale cluster. This cluster consists of scales pertaining to "academic things" which were grouped because of counselor experiences with a prepublication form of the CPI. The fourth cluster also was not intended to be a factorially determined grouping.

The above studies agree that a reduced number of dimensions (probably four or five) will account for a major proportion of the reliable variance of the eighteen CPI scales as scored by Gough (1957). It is difficult to make exact comparisons since the factor analytic procedures used vary from an orthogonal, objective rotation method used by Mitchell and Pierce-Jones to an oblique, subjective rotation procedure by Crites *et al.* In both studies there is some agreement with Gough's classification of scales into groups, especially with the content of Groups I and II. To some extent, however, his classification of scales does not agree with scale groupings derived from factor analytic results. The above studies are based on restricted samples of college students and do not provide a firm basis for generalizing to a college student population. While this does not discount their value to those interested in the populations represented, samples from less restricted populations are needed to establish more firmly the dimensional structure of the CPI scales.

The present study was designed to further explore the structure of the CPI scales in a population frequently evaluated with this instrument for counseling purposes: high school juniors and seniors. To control for the possible influence of sex, only males were sampled.

Procedure

The sample consisted of 226 male, high school students predominantly in their senior year or within one month of completing the junior year. The subjects were

Table 1
Rotated Factor Matrix for the California Psychological Inventory

CPI Scales	A	B	C	D	E	h ²
Self-Control (Sc)	.91	-.22	-.14	-.16	.00	.93
Tolerance (To)	.81	.11	.31	.09	-.08	.78
Achievement via Conformance (Ac)	.79	.24	-.05	.10	.12	.71
Well-being (Wb)	.78	.17	-.01	.14	-.29	.74
Good Impression (Gi)	.77	.14	-.16	-.32	.06	.74
Socialization (So)	.70	-.09	-.22	.25	.11	.62
Responsibility (Re)	.70	.14	.00	.12	.45	.72
Intellectual Efficiency (Ie)	.66	.36	.38	.05	-.14	.74
Achievement via Independence (Ai)	.62	.08	.56	-.01	.06	.71
Psychological Mindedness (Py)	.55	.19	.20	-.26	.07	.45
Self-Acceptance (Sa)	.00	.82	.03	.06	.02	.68
Sociability (Sy)	.28	.82	-.11	.01	-.09	.76
Dominance (Do)	.28	.71	-.11	-.10	.22	.65
Capacity for Status (Cs)	.42	.61	.33	-.14	.01	.68
Social Presence (Sp)	.02	.60	.34	-.14	-.38	.64
Flexibility (Fx)	-.03	-.01	.61	-.02	.06	.38
Communality (Cm)	.16	.10	-.04	.47	.09	.27
Femininity (Fe)	.25	-.18	-.08	.08	.56	.41
Per cent of Common Factor Variance	50.2	25.7	11.4	5.1	7.6	100.0

Note:—Decimal points omitted; all values are .XX and rounded to two figures.

drawn from six high schools in northeastern New Jersey representing residential as well as industrial communities. Subjects were obtained by selecting every second or third male student, depending upon class size, from a roster of the class. The mean age of this group was 17 years, 4 months.

A product-moment correlation matrix² with the eighteen CPI scales as variables was computed.³ Seven centroid factors were extracted with communalities estimated by the highest correlation of a scale with the remaining seventeen scales. The seven factors accounted for 53.5, 21.0, 10.6, 6.0, 5.2, 2.0 and 1.7 per cent of the communal variance respectively. The first five factors were selected for rotation because of the drop in variance between the fifth and later factors. In addition, only one loading

on the sixth factor is greater than .2 and none on the seventh factor was greater than this figure, while on the fifth factor five were greater than .2 with two greater than .3. The remaining five factors were rotated by the quartimax method described by Neuhaus and Wrigley (1954).

Results

The rotated factor matrix is presented in Table 1. The five factors accounted for 50.2, 25.7, 11.4, 5.1, and 7.6 per cent, respectively, of the common factor variance. Two primary dimensions accounted for 76 per cent of the communal variance. On the basis of the factor loadings the following descriptions of the factors are set forth.

Factor A had its highest loadings, ranging from .55 to .91, for the CPI scales labeled Self-control (Sc), Tolerance (To), Achievement via Conformance (Ac), Sense of Well-being (Wb), Good Impression (Gi), Socialization (So), Responsibility (Re), Intellectual Efficiency (Ie), Achievement via Independence (Ai) and Psychological Mindedness (Py). *Factor B* yielded high loadings, ranging from .60 to .82, on the five scales called Self-acceptance (Sa), Sociability (Sy), Dominance (Do), Capacity for Status (Cs) and Social Presence

²A one-page table of the CPI scale intercorrelations used in this study has been deposited with the American Documentation Institute. Order Document No. 7810 from ADI Auxiliary Publications Project, Photoduplication Service, Library of Congress, Washington 25, D. C., remitting in advance \$1.25 for microfilm or \$1.25 for photocopies. Make checks payable to: Chief, Photoduplication Service, Library of Congress.

³Computer operations were performed through the services of the Watson Scientific Laboratory of Columbia University.

(Sp). *Factor C* yielded loadings of .56 and .61, respectively, on the two scales entitled Achievement via Independence and Flexibility (Fx). The only high loading of the Flexibility scale occurred on this third factor. *Factor D* was poorly defined and revealed a factor loading of .47 on the CPI Communality (Cm) scale. *Factor E* presented only two loadings of any note. The CPI Femininity (Fe) and Responsibility (Re) scales produced loadings of .56 and .45, respectively, on this factor. The Re scale was previously noted to have a substantial loading also on Factor A.

Discussion

The factor analytic results reported by Mitchell and Pierce-Jones suggested four CPI scale classes but of different composition from those proposed by Gough. The study by Crites and his associates also suggested only partial support of Gough's scale groupings. Factor A of the present study closely agrees with Factor I of Mitchell and Pierce-Jones' research. Correspondence is even greater when it is noted that the CPI scales called Socialization, Achievement via Independence, Intellectual Efficiency and Psychological Mindedness, while not included in the description of Factor I in the Mitchell and Pierce-Jones study, attained loadings ranging from .43 to .47 in their investigation. Class II, as found by Crites and his co-workers, closely agrees with the present findings and those of the earlier study. Factor A principally involves, with some exceptions, those CPI scales grouped in Classes II and III by Gough (1957). The exceptions are the desirability for inclusion of the Sense of Well-being (Wb) scale in the grouping as well as the probability that the Communality scale should be excluded. In the personal communication from Gough, he recognized that the Wb scale may be misclassified in the profile sheet clustering.

A crude estimate of the reliable variance of the Factor A scales, based upon reliabilities for 101 high school junior males reported by Gough (1957, p. 22), suggests that a great proportion of the reliable vari-

ance is accounted for by this factor and leaves little or no specific variance to further differentiate the subjects. The Self-control, Tolerance and Achievement via Conformity scales best meet these criteria. The first of these scales is almost a pure measure of this factor, thus suggesting the use of the scale name, *Self-control*, as a tentative title for Factor A. Mitchell and Pierce-Jones have tentatively named their Factor I, Adjustment by social conformity, which is reasonable when the total factor composition is inspected. These writers have also suggested that the self-control scale for practical purposes is a pure measure of the factor. Using a more sophisticated approach in which scales with the largest factor loading and minimum number of items overlapping other scales was obtained, Crites and his co-authors found their Class II factor to be best defined by the Good Impression (Gi) scale. Based upon existent findings, the first factor appears to represent the social stereotype of the well-adjusted, mature, stable and adequately functioning individual who utilizes his abilities in an effective manner, is interested in and able to relate well with others, who accepts himself and others and is accepted by others, and who presents himself in a favorable manner. Factor A, then, may well be measuring a concern with the presentation of the self and thus a dimension of social desirability.

Factor B of the present study is closely similar to the second factor of Mitchell's investigation, the first factor found by Crites, and the grouping in Gough's Class I. Inclusion of the Sense of Well-being scale does not seem appropriate. The Dominance, Sociability and Self-acceptance scales appear to be the most specifically defined scales, thus suggesting a tentative factor name of *Self-acceptance and Outgoingness*. The additional investigation conducted by Crites and co-workers (1961) suggested that the Dominance scale clearly represents the Class I scales. The grouping has been called Social Poise or Extroversion by Mitchell and Pierce-Jones, which factor they have suggested is equally well

measured by the Dominance, Socialization and Self-acceptance scales. The three studies appear to have arrived at very similar findings in the scales clustering on this second factor. Tentative factor namings, while using different terms, have expressed similar pictures of social leadership and self-confidence. The data appear to reflect a dimension representing the individual who is socially aggressive or gregarious, who seeks to achieve to positions of renown or power and to positions which require some control over or supervision of others. Occupationally such an individual might be found, for example, in the administrative-supervisory positions in business-contact fields. Again a form of socially desirable attitudes may be reflected.

The other factors in the present investigation do not agree with those proposed by the author of the instrument nor exactly with the two previously cited studies. Differences in the findings may be due to differences in sample compositions. Both previous studies employed male and female subjects of somewhat older age than the subjects used in the present study. Differences may also be due to the probability that factors beyond the first two are vaguely defined. Factors C, D and E at best may be secondary factors.

Factor C is primarily defined by the Flexibility (Fx) scale and the Achievement via Independence scale. The latter is also substantially represented on the first factor. Flexibility seems a suitable tentative label for this factor considering the fact that a large proportion of the Fx scale's reliable variance is loaded on this factor. Crites and his fellow investigators also found a specific factor assessed by the Flexibility scale which had a negligible relationship to other measures.

Factor D is almost exclusively defined by the Communality scale, one of the measures proposed as an assistance in detecting those subjects who deliberately distort their responses. A tentative factor name of *Modal Response* is proposed. The Communality scale has been placed in the Class II measures of the Crites investigation and

in Factor III (Super Ego-strength) by Mitchell and Pierce-Jones.

The fifth and final factor extracted, Factor E, is composed of a measure of masculinity or femininity of interests (Fe) and, to a lesser degree, a scale "Responsibility" for the identification of conscientious, responsible and dependable individuals. The CPI Responsibility scale, however, possesses a substantial and even larger loading on Factor A. As a consequence, a tentative name of *Masculine-feminine Interests* appears reasonable. The Femininity scale was included in the Factor III grouping found by Mitchell and Pierce-Jones. The Mitchell factor was best estimated by the Femininity and Communality scales, which also appeared to be independent of other factors. In the article by Crites and others, reference is made to the Femininity scale as being a specific factor with negligible relationships to other scales.

At the time of the writing of this article a factor analysis of the CPI scales based on the responses of 104 male psychiatric patients leaving a Veterans Administration hospital was received from Lorei (research in progress).⁴ The factor analytic procedures used in Lorei's analysis were identical with those used in the present study. The factorial structure in terms of factor loading patterns and magnitudes were so strikingly similar in Lorei's and the present study, especially in view of the extreme differences in sample characteristics, that we decided to factor analyze the two CPI correlation matrices presented in Gough (1957, p. 33), again using identical procedures as in the present study.

Gough's two samples, both with N greater than 3,000, are composed primarily of high school students. One sample is male, the other female. The results strongly support the generalization that the factorial structure of the CPI variables are very similar in the four studies when similar factor analytic procedures are used. As in the present study, there are two major dimensions, accounting for an average of 75 per cent

⁴Personal communication from Theodore Lorei, Veterans Administration Hospital, Lyons, N. J.

of the communal variance, and two minor factors, accounting for the remaining communal variance, in all of the four studies.

Implications for the Counselor

As previously indicated by Thorndike (1959, p. 99), the CPI scales contain a great deal of redundant variance. The studies described above indicate this to be a general characteristic based on studies of several diverse populations. The counselor, on receiving a profile of eighteen scores from the CPI scales, faces the problem of interpretation. If he asks whether *eighteen independent* aspects of personality are measured by the eighteen scales, the answer must be an emphatic "No."

As Crites and his co-authors (1962) demonstrate, and as the previously cited studies imply, a very large percentage of the *reliable* variance is predicted by five or six reference dimensions or scales. To further support this assertion the internal consistency coefficients of reliability were estimated for the eighteen scales on the three high school samples (the two of Gough and the present study) according to the pro-

cedures of Lord (1957, 1959). The mean of the estimated communal variance for each scale on the three studies was subtracted from the mean reliability coefficient of that scale, leaving the mean specific variance for each scale as presented in Table 2. The results strongly support the position that, generally, little reliable variance remains when the variance accounted for by five independent dimensions is subtracted. If the reliability coefficients are not gross underestimates, then the implications for the counselor become clear: it is untenable to classify the client along more than five dimensions. That is, any further delineation of personality would depend on reliable variance beyond that accounted for by the five independent dimensions, namely the specific variance. One need only study the formula for the reliability of a difference score (Guilford, 1954, p. 394), and the work of Cohen (1959) with the Wechsler Intelligence Scale for Children to realize how questionable it is to interpret profiles based on moderately related scales even with relatively high reliability.

Gough's orientation for the CPI is for use with individual cases to "forecast sig-

Table 2

The Mean Percentage of Reliable, Communal and Specific Variance in the Eighteen CPI Scales as Estimated from Three Factor Analytic Studies

CPI Scale	Mean Percentage		
	Reliable Variance	Communal Variance	Specific Variance
Dominance (Do)	77	65	12
Capacity for Status (Cs)	70	67	03
Sociability (Sy)	76	75	01
Social Presence (Sp)	67	68	01
Self-acceptance (Sa)	59	62	03
Sense of Well-being (Wb)	71	75	04
Responsibility (Re)	72	64	08
Socialization (So)	70	52	18
Self-control (Sc)	87	86	01
Tolerance (To)	80	74	06
Good Impression (Gi)	80	75	05
Communality (Cm)	30	31	01
Achievement via Conformance (Ac)	74	72	02
Achievement via Independence (Ai)	64	71	07
Intellectual Efficiency (Ie)	73	73	00
Psychological Mindedness (Py)	37	45	08
Flexibility (Fx)	68	43	25
Femininity (Fe)	43	31	12

Note:—Decimal points omitted; all values are .XX.

nificant interpersonal events."⁵ The present investigation does not necessarily reduce the usefulness of the CPI but it does suggest the need to reconsider what is being measured by the scales and the desirability for reducing the number of scales. The counselor who wishes to make use of factor analytic results would find it quite easy to organize standardized test score results to fit the factorial structure of the eighteen scales. For example, assume the results of the factor analysis presented in Table 1 were performed on the population of interest. The counselor could average the client's standard scores on the Self-control, Tolerance and Achievement via Conformance scales to get a good estimate of the individual's standing on Factor A. Similarly, his standing on Factor B could be accurately estimated by the average standing on the Sociability, Dominance and Capacity for Status subtests. The Flexibility subtest standard score is the best estimate of Factor C, while Factors D and E are best estimated by the Communality and Femininity subtests respectively. Thus, the counselor would have standard score rankings of his client on the five dimensions justified by the factor analytic results. Interpretation then might well be based upon the proposed interpretations of Factors A and B as suggested earlier in this article and the interpretations of the three scales comprising Factors C, D and E, as suggested by Gough.

The recommendations for use, however, are essentially stop-gap methods. Further study seems indicated. A series of factor analytic studies at the item level may help to understand what is being measured by the CPI items. With the aid of electronic computers, for example, analysis of a ran-

dom selection of 150 items administered to a large number of subjects would provide the data necessary for an approximation of the number of dimensions in the CPI items. It may well be that interesting dimensions of personality are obscured by Gough's scoring system. The large number of items in each scale and the relatively low reliabilities suggests the presence of more than one dimension in each scale, a notion that could be tested by factoring each scale at the item level.

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⁵Personal communication from Harrison Gough.

A Note on the Distinction Between Social Desirability and Acquiescent Response Styles as Sources of Variance in the MMPI

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An analysis of the relationship between true-false keying in the MMPI and the social favorability of the items reveals a tendency for socially favorable items to be keyed "false" and socially unfavorable items to be keyed "true." This finding would seem to indicate that response styles arising from social desirability and acquiescence are counterbalanced in a fashion which protects the validity of the MMPI.

This paper reports findings which arise from a direct and rather simple analysis of the relationship between rated favorability (social desirability) of items in the MMPI and their true-false keying. The findings are indicative of several fundamental characteristics of the MMPI which deserve attention relative to recent controversy as to the importance of various response styles in the production of MMPI records. It is felt that research which selects the MMPI for purposes of testing hypotheses concerning the effects of response sets often serves to obscure peculiarities of this test which are apparent at a descriptive level. At particular issue here is the interaction of influences dependent upon the content of the items as regards social desirability and influences which appear to be a function of the true-false format of the test. The objective test format gives rise to a set to answer doubtful items in an affirmative way (acquiescence), while apparent face validity of the items encourages testees to select their answers so as to give a favorable impression of themselves whenever possible. Present results indicate that these response styles are effectively balanced against each other in the MMPI so that the validity of the test is not chal-

lenged in the degree to which some authors have claimed, when it is demonstrated that significant variance in the MMPI is attributable to favorability and acquiescence. It seems clear, in light of the balance of factors, that the power of the test to discriminate basic neurotic and psychotic patterns is increased expressly because of interacting response styles.

A Brief Review of Recent Findings

The influence of the social desirability of test items in self-report personality inventories such as the MMPI has been emphasized by Edwards (1957, 1959, 1962). His evidence related to the MMPI consists of a demonstration of significant correlations between a social desirability scale (SD, Edwards, 1957) keyed from the MMPI item pool and the clinical scales in the MMPI. Edwards' position may be seen as an extension of the point of view that objective personality inventories are vulnerable because they do not produce factual self-reporting; because testees tend to avoid admitting to traits which are perceived as socially unacceptable. Edwards' findings were challenged by Wiggins (1959), who suggested that the SD scale is subject to the effects of acquiescent tendencies since

30 of the 39 items which make up the scale are keyed "false," so that an acquiescent testee would establish a high score on this scale. Edwards (1962) answers by manipulating both true-false keying and social desirability (established on the basis of Heineman's favorability ratings of MMPI items) to show that social desirability is a more important determinant of variance in the MMPI than the acquiescence set. He suggests that doubtful items occasion acquiescent tendencies in a socially favorable direction.

Fricke (1956, 1957) investigated the influence of acquiescence as a variable in MMPI records, an appropriate inquiry since 63% of the MMPI items are keyed "true." He offers evidence which isolates the acquiescence set as a significant determinant of MMPI responses. Jackson and Messick (1958, 1961, 1962) have conducted factor analytic studies of MMPI records and their results lead them to conceptualize social desirability and acquiescence as independent sources of variance which present an orthogonal relationship. When variance attributable to these factors is removed, they find relatively little residual variance which may be attributed to the clinical scales in the MMPI. The Jackson and Messick analysis indicates a marked tendency for the "true" keys and the "false" keys in given MMPI scales to display loadings on different factors. Since acquiescence seems to mediate in test-taking behavior, item content is reduced in importance. To the extent that the validity of the MMPI is dependent upon truthful self-reporting, their work questions the effectiveness of the test.

Wiggins (1962), in a general review of research and theory related to the MMPI, reports a replication of a study by Barnes (1956). Both the Wiggins' study and the Barnes' study indicate that responses to items which are keyed "true" (according to standard MMPI scoring keys) identify a deviation from "normal" (as defined within the context of this test), which is uncorrelated with a deviation based on responses to items keyed "false." The finding is consistent with Jackson and Messick

(1962) results and leads Wiggins to identify as distinct the response styles, "deviant true" and "deviant false." He elaborates the acquiescence set to include a "cautiousness set," that is, a tendency to answer "false" when in doubt. Wiggins also interprets accumulated evidence in terms of Berg's (1957, 1959, 1961) "deviation hypothesis." Berg suggests that "response biases" displayed in personality inventories such as the MMPI, are reflections of deviance from the "normal" population. Disregarding item content and truthful reporting, responses which deviate from those most commonly given, may be taken, according to Berg, as a means of identifying the testee with a deviant group rather than with the "normal" group. This position provides an answer to the criticism often leveled against objective personality tests on the basis of a lack in veridical self-reports.

The Present Study

The mean favorability ratings for MMPI items (based upon judgments of 108 college students) presented by Heineman (1952), were used as a basis for the present analysis. Heineman employed a five-point rating scale with "very favorable" assigned the rank of "1" and "very unfavorable" assigned the rank of "5." For present purposes, the population median ($Md=3.46$) of the array of means Heineman reports is accepted as identifying a neutral point in favorability. To investigate the relationship between favorability and item keying, item ratings were organized according to standard MMPI scales, with true-false keying determining the formation of subscales. A median was established for each scale and subscale. These medians, along with the number of means upon which they are based (number of items in each scale and subscale), are presented in Table 1. Also included in Table 1, are the results of median tests with Chi-square, applied where possible. Reported Chi-squares were calculated using a formula given by Peatman (1963, p. 366) which incorporates Yates' correction. The null hypothesis tested by Chi-square in

this case may be specified as follows: the proportion of means for items keyed true (or false) falling above (or below) a given scale median is not significantly different from chance.

It will be observed (with reference to Table 1) that there is a general tendency with any given scale, for the median "trues" to be of higher value than the population median, while the median "falses" tends to fall below the population median. In effect, these results demonstrate an affinity between "true" keying (as identified according to the scoring key for the MMPI, Hathaway and McKinley, 1951) and unfavorability. Likewise, there is an affinity between "false" keying (identified as above) and favorability. The relationship is further evidenced in the median favorability rating for all "trues" ($Md=4.30$) as compared with the median favorability rating for all "falses" ($Md=2.33$). Examination of scale medians (based upon mean ratings for all items in a scale, without regard for their true-false keying) demonstrates that scale favorability values tend to lie closer to the population median (neutral point) than subscale medians. This effect is a consequence of the aforementioned affin-

ity between true-false keying and low-high favorability and would appear to indicate a natural balancing of item favorability in standard MMPI scales. (The phrase, "natural balancing," is used advisedly because the manner in which the MMPI was developed did not take cognizance of acquiescence and social desirability as such. The observed effect seems to arise out of an empirical approach to item validity.) The median tests with Chi-square (this test was not made for the *L* scale because it contains only "false" items, nor the *K* scale which contains only one item keyed "true") show that the distribution of mean item-ratings organized according to their true-false keying is other than that which would be expected by chance in all scales tested except *F* and *Ma*. The *F* scale has the lowest overall median favorability rating and the *Ma* scale has subscale median favorability ratings very close to the scale median. As a scale, *Ma* seems to present little difference in average favorability of items keyed "true" and "false."

General Discussion

In light of present findings, it is clear that a response style of acquiescence will

Table 1
Median Favorability Ratings for MMPI Scales^a
(including results of median test with X^2)

Scale	L	F	K	Hs	D	Hy	Pd	Pa	Pt	Sc	Ma	Si
Scale Medians	2.79	4.17	3.35	2.19	3.07	3.09	3.50	3.56	3.96	4.05	3.57	3.81
Number of "true" Items	0	44	1	11	20	13	24	25	39	59	35	34
Subscale Medians ("true")	.....	4.38	1.66	4.33	4.05	4.20	4.07	4.53	4.68	4.22	3.65	3.82
Number of "false" Items	15	20	29	22	40	47	26	15	9	19	11	36
Subscale Medians ("false")	2.79	1.58	3.55	1.94	2.25	2.60	2.62	3.42	1.58	1.71	3.44	2.19
X^2	b	2.33	b	14.07	16.87	9.63	14.18	10.24	7.96	9.06	.06	26.39
Probability	.....	<.05	.....	>.001	>.001	>.005	>.001	>.001	>.005	>.005	<.25	>.001

^aBased upon mean favorability ratings presented by Helneman (1952). MF is not included because male and female judgments were not distinguished.
^bThe median test with X^2 was not possible for L because it contains no items keyed "true" nor for K which contains only one item keyed "true."

tend to produce MMPI test records in which the testee admits to socially undesirable characteristics. To answer "true" to MMPI items is to acquiesce to more or less obvious pathological symptoms upon which the MMPI is based. A response style of social desirability, on the other hand, demands that the testee avoid the acquiescence set. If acquiescence is a characteristic of the American population (a speculation mentioned by Wiggins, 1962), it is balanced against a tendency for creating a favorable impression. Relatively few items appear to escape this balance if Wiggins' (1962) estimate that only 10% of the items in the MMPI are truly neutral in desirability is accepted. Edwards (1962), in advancing his social desirability hypothesis, suggests that the effects of acquiescence are insignificant because this response style operates only with neutral or doubtful items. He cites Cronbach's discussion (1946) of the acquiescence set in support of his contention. By this reasoning, however, the effects of social desirability are also questionable in terms of overall test records. When the average favorability of MMPI scales is considered without concern for their true-false keying, the present analysis reveals a tendency for scales to approach a neutral point in favorability. The proportionally greater number of items keyed "true" is offset by an attractiveness of items keyed "false." Jackson and Messick's (1962) finding that residual variance attributable to factors other than acquiescence and desirability is small, does not justify the suggestion that MMPI scales are therefore reduced in effectiveness as regards clinical diagnosis. Though small, the residual variance becomes critical when other sources are balanced.

The final point relates to Wiggins' (1962) discussion of "deviant true" and "deviant false" response styles. With a general relationship between true-false keying and social desirability in the MMPI, opportunity is afforded for measurement of a basic dimension of psychopathology. The net result of an affinity between a "cautious" response style (unwillingness to say

"true") and social desirability appears to contribute to the identification of a basic neurotic pattern. A relationship between "deviant false" and the neurotic triad has been demonstrated by Barnes (1956) and has been noted by Messick and Jackson (1961). The testee who consistently responds deviantly "false" to favorable items may be revealing a disregard for item content which extends only to a certain class of items; items which are sensitive to denial in a deviant direction. This thesis is also compatible with Wiggins' finding that the "deviant false" response style is highly correlated with Block's (1953) Neurotic Overcontrol scale. Conversely, the testee who is unconcerned with assigning himself socially undesirable traits will display a "deviant true" style of response. He appears free to acquiesce to pathology as it is represented within the MMPI because he is unresponsive to the social desirability of his answers. He may, in fact, select opportunity to assign himself pathological symptoms. Barnes (1956) confirms what is apparent at a descriptive level in reporting a high correlation between "deviant true" and the psychotic scales of the MMPI. The fact that the *K* scale shows a high negative correlation with "deviant true," but is uncorrelated with "deviant false" (Wiggins, 1962) would seem to indicate item selectivity on the part of the psychotic group. All but one of the 30 items in the *K* scale are keyed "false."

The particular tendency for items to be organized so that acquiescence and desirability are balanced within the various scales in the MMPI may contribute to a critical differentiation among deviant responses. Such differentiation, (as Berg, 1959, points out) can be conceived to operate at a level apart from item content or truthful responses as such. It operates, according to the present interpretation, because response styles play a role in test-taking behavior (rather than in spite of the influence of such response styles). Berg's thesis that item content is not essential for basic assessment of personality is supported by present findings. At the same

time, however, if we assume (with Dahlstrom, 1962) that the MMPI does produce veridical reporting in response to a sizable group of items, it may be on this basis that some sources of variance can be assigned to the face validity of clinical scales. In other words, we may come to believe that further refinement of the character of deviant responses, beyond the broad distinctions which are derived from analysis of stylistic tendencies, is accomplished through content of specific items and factual self-reporting.

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Research Frontier

Regional Rehabilitation Research Institutes¹

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In the last decade, counseling and research in rehabilitation settings has become a significant factor in counseling psychology. Much of the recent advance is a function of the substantial financial support given training and research by the Vocational Rehabilitation Administration. The impact of VRA on our research literature is now becoming visible. It is the purpose of this article to call attention to the Regional Rehabilitation Research Institutes which have already completed and have under way research of general interest to counseling psychologists.

All of the Institutes are jointly supported by the respective universities and VRA. Their purposes, in a general way, follow those stated by the University of Minnesota staff. Any of them will, upon request, supply bibliographies of their published papers.

Since 1959, five universities have established Institutes. Each unit is committed to core research programs in areas important to vocational rehabilitation. The programs for the first three are described below by their leadership. Within the past year, two additional Institutes have been established. At the University of Wisconsin, the Institute will focus upon "Professional Functions of Rehabilitation Counselors." Northeastern University will direct its research toward "Motivation and Dependency in Rehabilitation."

University of Minnesota

The Regional Vocational Rehabilitation Research Institute (formerly known as the Regional Research Center) was established in the Industrial Relations Center, University of Minnesota, on July 1, 1959. Establishment of the Institute followed two years of research activity (1957-1958) in the general areas of assessing the magnitude of rehabilitation problems and studying methodological problems in carrying out research on the outcomes of rehabilitation. It is located in the Industrial Relations Center as one of the research laboratories in this larger enterprise. The Industrial Relations Center provides an interdisciplinary approach to research, close contacts with management, labor and government, and excellent reference resources. On campus, consultants in all of the disciplines relevant to rehabilitation are available to the Institute.

Purposes of the Institute: The purpose of the Institute is fourfold:

1. To conduct a continuous research program in the area of work adjustment problems of the handicapped.
2. To train research personnel to work in rehabilitation.
3. To assist state and private rehabilitation agencies in formulating and solving operational and service problems.
4. To stimulate rehabilitation research activity in the contributing professions.

Activities: To implement its fourfold purpose, the Institute engages in the following activities:

1. Conducts a continuous core research program, the Work Adjustment Proj-

¹The authors listed prepared descriptions for Institutes at their university. The introduction was prepared by John E. Muthard.

ect, which contributes to the evaluation and measurement of rehabilitation outcomes, making it possible to devote meaningful effort to the study of and the improvement of rehabilitation services.

2. Publishes research findings in a continuing series of research bulletins, entitled *Minnesota Studies in Vocational Rehabilitation*.
3. Maintains communication with other Regional Research Institutes and administrative personnel in the Vocational Rehabilitation Administration.
4. Assists state agency directors in the identification of problem areas requiring research activity.
5. Provides research consulting services for public and private rehabilitation agencies.
6. Conducts annual research conferences for Region VI (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota) state agency directors and research personnel to facilitate the utilization of research findings in agency program development.

The Core Research Program: The Institute's core research program, Work Adjustment, has three major objectives: (1) the definition and measurement of criteria for work adjustment among the physically handicapped; (2) the determination of correlates which "explain" work adjustment and (3) the development of a systematic psychology of disability.

The design of the project calls for the collection of longitudinal data on three sets of work adjustment data: satisfaction, satisfactoriness and work history. "Satisfaction" consists of variables which represent the individual's view of his work adjustment. "Satisfactoriness" includes variables which represent the employer's view of the individual's work adjustment, primarily in terms of how satisfactorily the individual performs his job. Varying degrees of satisfaction and satisfactoriness presumably result in employee and employer behavior (with particular reference to job tenure). The consequences are reflected in work history variables. The project design also calls for the collection of

data on correlates which hold most promise as the determiners of work adjustment. These correlates include personal factors (such as sex, age, disability, aptitudes, needs, interests and personality), job factors (such as type of work and working conditions), situational factors (such as family circumstances, socioeconomic circumstances, management attitudes and labor market conditions) and antecedent conditions (such as education, vocational preparation, family background and rehabilitation history).

Data were obtained for 100 handicapped and 100 "control" persons in each of five occupational groups (a total of about 1000 persons): blue collar non-skilled, blue collar skilled, white collar non-skilled, white collar skilled and professional. The "control" persons are non-handicapped individuals working in the same firm and where possible in the same work groups as the handicapped persons. For each person in the sample and for each matched pair of handicapped and "control" persons, data on satisfaction, satisfactoriness and work history are being obtained at yearly intervals.

Analysis of the data includes (a) determining the dimensions or factors of work adjustment; (b) developing methods of obtaining reliable scores for each work adjustment factor; (c) investigating the interrelationships among satisfaction, satisfactoriness and work history; (d) studying how satisfaction, satisfactoriness, work history and their interrelationships change over time; and (e) determining the correlates which best "explain" work adjustment. Analysis is also directed toward investigation of differences in work adjustment between handicapped and "control" groups, among occupational groups and among disability groups.

A Theory of Work Adjustment, with particular relevance to work adjustment of the physically handicapped, has been developed. This theory stemmed largely from the research undertaken in this project and is stated, in abbreviated form, as follows:

Work in contemporary society may be defined as behavior for which the most characteristic reinforcer is money. This behavior takes place in a locus called the work environment. The technical terms "position," "job" and "occupation" define various limits of the work environment. The work environment may be described in terms of the behaviors which are appropriate in it and the stimuli which are potential reinforcers available to the individual in this environment. When the individual behaves in a manner appropriate to his work environment, the likelihood of his behavior being reinforced is increased. The process by which the individual (with his unique set of abilities and needs) acts, reacts and comes to terms with his work environment is called work adjustment.

The course of an individual's work adjustment is best studied through continuous observation of the individual while he is in his work environment. Since this is not practicable at present, it becomes necessary to infer the course of work adjustment from indicators and/or outcomes of the process. The most easily observed outcome is the length of time the individual stays in a given work environment. The longer an individual stays in a given work environment, the more probable it is that the individual has arrived at some adequate adjustment with this environment. When the individual leaves a given work environment, one may infer that the adjustment was inadequate.

"Leaving the work environment" may occur because the individual is no longer "satisfactory," i.e., he no longer exhibits the "appropriate" behavior and is forced to leave. On the other hand, "leaving the work environment" may be an action initiated by the individual because he is no longer "satisfied," i.e., some other work environment is "more attractive" or his former work environment makes him "dissatisfied," or both. These conditions, under which the individual's relationship with a given work environment is terminated, imply two im-

portant indicators of the work adjustment process: satisfactoriness and satisfaction. If it is possible to determine varying amounts of satisfactoriness and satisfaction, then the state of the individual's work adjustment at any given time may be defined by his concurrent levels of satisfactoriness and satisfaction.

Work adjustment, defined now by satisfactoriness and satisfaction, is the outcome of the interaction between an individual and his work environment. The significant aspect of the individual in this interaction is his work personality, which includes his unique set of abilities and needs. These same terms, abilities and needs, may be used to describe the significant aspects of the work environment, i.e., in terms of the abilities required (for satisfactory work behavior) and the reinforcers available (for need satisfaction).

Sub-projects: Testing of research hypotheses generated by the theory is underway. An example is a study of how job satisfaction moderates the relationship between degree of job "fit" and job performance.

Parallel instruments are being developed to measure vocational needs and job satisfaction in terms of the same set of need dimensions.

A study of occupational suitability is being completed. In this study data on each person's aptitudes are compared with aptitude requirements for his job as estimated in the U. S. Employment Service *Estimates of Worker Trait Requirements and Occupational Aptitude Structure* to determine the degree of his occupational suitability. The relationship of suitability or non-suitability to satisfaction and satisfactoriness is determined. The effects on this relationship of personal variables such as disability, age, marital status, number of dependents, educational level, occupational level and length of time on present job are also being studied.

Analyses are being made of changes in work history data collected over varying time periods.

A study is being conducted to determine the need dimensions represented in the Strong Vocational Interest Blank.

A study of personality correlates of satisfaction and satisfactoriness is underway.

Agency Research Projects: The Regional Rehabilitation Research Institute offers its assistance to agencies in applying research methods to the study of particular agency problems. State rehabilitation agencies in Region VI are cooperating in the Institute's study of counselor attitudes, counselor performance and turnover as they relate to counselor selection.

University of Florida

The Regional Rehabilitation Research Institute was established in March, 1962, in the College of Health Related Services of the J. Hillis Miller Health Center. The Institute staff have two research programs underway. One program involves the exploration of personality and other intrinsic and extrinsic factors related to client motivation for rehabilitation. The second program concerns the motivations, personality and other characteristics of those in training for and working in certain of the health and rehabilitation professions. While these two research programs encompass the major activity of the Institute, there is also a consulting function.

Consultation by the Institute staff on the development and design of health and rehabilitation research is made available to the University of Florida staff. Research in various aspects of rehabilitation is encouraged and stimulated among University staff and students by the Institute staff. This staff also encourages and aids state rehabilitation agencies in Region IV* to apply research techniques to operational problems. Consultation on the development and conduct of state agency research and demonstration is available, and research activity is stimulated by this in

each of the ten state agencies of Region IV. As part of this program, an annual research conference is conducted for the research coordinators of the state agencies of the Region.

Research on client motivation for rehabilitation: A review of the literature on this topic suggests that the term "motivation" has varied meanings to different investigators. Research on client motivation usually has been focused upon specific disability groups, e.g., retardates, cardiacs, psychotherapy patients, etc. Findings from such studies often have been limited in their implications to such a single group of patients. Thus, studies including more than one patient group are planned. Longitudinal studies of patients beginning soon after the acute phase of their illness or injury is over, and extending into their subsequent work settings, is one approach to a more comprehensive understanding of client motivation. Data on attitudes toward different aspects of their treatment are being collected and summarized. The application to rehabilitation of the Herzberg notion of growth and hygiene motivations is being explored. Other studies are focusing on the role of value systems and specific rewards in client motivation.

Research on the motivation of professional persons for working in rehabilitation: Biographical, interest, attitude, personality, ability and performance data are being systematically collected from students entering the occupational therapy, physical therapy and medical technology training programs at the University of Florida. These data are being contrasted with comparable information from students not entering these programs. One question of special interest concerns how career choices develop. Other studies involve differentiating the students in these training programs, one from another. Also within each training program, it is planned to differentiate successful from unsuccessful students and to follow these students into work settings. It is planned to extend these studies to other related rehabilitation areas.

*Includes Alabama, Florida, Georgia, Mississippi, South Carolina, and Tennessee.

such as nursing and special education, and to programs at other universities.

University of Utah

The Regional Rehabilitation Research Institute was established on the University of Utah campus in July, 1962, and for the first year was engaged in a broad educational program concerning rural rehabilitation research. One of the first events was the formation of an interdepartmental committee on rehabilitation composed of experts from various disciplines to serve as consultants both to the staff of the Institute and to the different vocational rehabilitation agencies in the region, which includes the states of Colorado, Idaho, Montana, Utah and Wyoming.

The Core Research Program: The Institute staff conducts a continuous core research plan entitled "Interpersonal Relationships in Rural Rehabilitation." In the realm of interpersonal relationships in rehabilitation, the most basic relationship is that of counselor-client. If a good relationship is formed with this dyad, then the entire rehabilitation process has a much better opportunity of succeeding. There are other interpersonal relationships in rehabilitation such as the relationships existing between the different members of the whole rehabilitation team. For example, the relationship between the counselor-client, counselor-family, counselor-community, counselor-employer, or any combination of these is important in the whole rehabilitation process. However, the initial plan of the Research Institute staff is to concentrate on the relationships between the counselor and the client with the aim of arriving at means of measuring those relationships and studying their effect on the complete rehabilitation process.

Since job placement is, in reality, a problem in vocational rehabilitation, and since interpersonal relationships are important in all phases of job placement, the first phase of the core research will study "The Influence of Interpersonal Relationships on Job Placement." While it is recognized that many other variables such as client's

disability, availability of jobs, etc., affect the job placement process, interpersonal relationships would seem to be one of the most important variables.

Activities: Early in the first year of operation, a meeting was held in Salt Lake City with all of the State Directors in the region. At that meeting a liaison person was appointed from each state to work with the staff in the Institute. Later in the year, a meeting was held in Salt Lake City with these liaison persons to discuss and plan research needs in their respective states.

Another function of the Institute is to train students in research. During the first year, fourteen graduate students completed master's dissertations from rehabilitation data. Abstracts of these theses were sent to each of the rehabilitation offices in the region. The central theme of these student theses was the adjustment of vocational rehabilitation clients, and the data were obtained from previous VRA research grants which staff members of the Institute had participated in.

One of the first problems encountered by the Institute was the fact that those state offices which were using IBM equipment had not agreed as to the coding of their data. Through the liaison people, the advantages that would accrue by following the procedures for coding issued by the VRA office in Washington were accepted. With common coding the Institute will also be able to, when requested, use computer programs already on file at the Institute to obtain material for graduate student research.

An administrative review was conducted by the VRA Regional Representatives in each of the five state offices. The staff of the Institute was asked to code this material and analyze it in such a way that each state director could use it to increase the efficiency of his program. One director, as a result of this, has requested a further breakdown, particularly in regard to the procedures used in several offices within his state.

Comments and Letters

Counseling Techniques with Potential Drop-Out Students in Junior College

It is recognized that students entering junior college programs are often making trial attempts at further education or obtaining technical skills in a non-transfer lower division program. Therefore, an amount of drop-outs would be expected, especially in the non-transfer type program. The writers were interested in the possibility of changing attitudes of potential drop-outs.

Procedure

In his graduate research, Roleder (1962) constructed an attitude scale of 14 items which predicted 81 per cent of a drop-out group while labeling incorrectly only 27 per cent of the stay-in group at Mount San Antonio College. The following sample items show the nature of the vocabulary and the indirect measurement employed by the technique:

Studies show what percentage of successful business and professional workers have as their hobby the reading of Shakespeare's plays:

a) 17%, b) 14%, c) 11%, d) 8%, e) 5%
Studies show what percentage of persons postponed successful careers because they could not decide between several possible vocations:

a) 25%, b) 38%, c) 51%, d) 64%, e) 77%
These items were administered to 450 persons in General and Applied Psychology courses at Mount San Antonio College. The Ss were instructed to choose one of the five answers which they felt to be correct. Their choices were scored by the key in the original research, which indicated whether they preferred choices similar to potential drop-outs or stay-ins. A group of 186 students identified as potential drop-outs were randomly assigned to three different treatment groups of 62.

Of the three groups, Group A served as a control. Group B was submitted to a direct counseling approach to aid the student in the awareness of the drop-out tendencies and to aid by group counseling techniques. The initial statement read to the group was:

¹This research was done through the cooperation of John S. Stevens, Head of the Department of Counseling and Guidance at the College.

"A number of things put together form a pattern. Each of you has shown a drop-out pattern in an attitude survey taken in your psychology class. It is a matter of how you feel about college and about yourself. It is often impossible to decide what can be done to help such a person. That is really why you have been called together, to see if you might be able to help one another."

Group C was designated the non-directive counseling group. The approach intended to aid but not directly identify the groups as a potential drop-out group. This was done by involving them in problems of college life by using indirect survey sheets and supportive-insight discussions. Both Group B and C had three one-hour counseling sessions, the second, third and fourth week of the semester.

Results and Discussion

Results were treated statistically and showed that no significant difference existed among the three groups in number of drop-outs. At the end of the research semester, 19 had dropped from the control group, 21 from the direct counseling group and 19 from the non-directive group.

From these data the writers have asked themselves several serious questions about technique and/or procedure of the research. The most serious of these questions is "Why didn't the counseling, although brief, show some impact—positive or negative—for groups in which it was used?" This important question might only be answered by further research concerning the following questions:

1. Is the group counseling process too threatening, particularly in the direct approach?
2. Will more group sessions over a longer period of time be more productive?
3. Should the counseling be individual plus group, individual alone, or should other types of smaller (more intimate) groups be attempted?
4. And what of the technique of preventive drop-out counseling? Should it be (1) supportive and constructive only, (2) non-supportive and/or non-constructive (non-directive), or (3) regressive-reconstructive

toward a more realistic vocational and/or college goal?

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Intra-Individual Variability Findings for a Psychotic Population on Vocational Interest Inventories

This study falls within the "research program on intra-individual variability" defined as "the variability of an individual's behavior from one time to another" (Fiske & Rice, 1955, p. 217). According to a review by Anderson (1958, Ch. 1), terms used by investigators to describe these observed variations in performance include: function fluctuation, variability of performance, intra-individual consistency, variability of mental output, response variability, instability of a trait and others.

Following a very thorough survey of the literature, one of Fiske and Rice's conclusions, pertinent to this investigation, maintains that "the personality correlates of variability, if any, remain to be established definitively . . . we cannot state with assurance the nature of the relationships with neurosis and psychosis" (1955, pp. 242-243). However, Patterson, basing his opinion on Fiske and Rice's study and his own findings on the Wechsler-Bellevue Scales, is more affirmative: "There is considerable evidence that the intra-individual variability of emotionally-disturbed subjects is greater than that of normals on a wide variety of psychological tasks" (Patterson, 1958, pp. 248-249).

This study aimed to ascertain (1) whether Patterson's statement would also hold for vocational interest inventory results and (2) whether the results obtained from a second interest inventory would be affected by the experience of having taken another one a week earlier.

It was hypothesized that validity correlations between the Kuder Preference Record-Vocational (KPR-V) and the Occupational Interest Inventory (OII) scales would be lower for a neuropsychiatric (NP) population than for a normal one since variability of performance is known to have a lowering effect upon coefficients of correlation. The hypothesis was tested by comparing the normal population's correlations between the various scales of the two inventories as reported by Roeber in the OII Manual (Lee and Thorpe, 1956) with those obtained from the hospitalized emotionally-disturbed subjects used in the present investigation. To test the second aim, the regular counseling procedures were modified to the extent of administering both inventories a week apart. To one half of the emotionally-disturbed group the KPR-V was given first; to the other half the OII was given first.

The subjects were 100 male psychotic patients—91 diagnosed as schizophrenics and 9 as manic-depressives—who had been referred by their psychiatrists for counseling and therefore were presumably in some stage of partial remission. Their ages ranged from 18 to 50 years with a mean age of 31.2 years, and their IQ's ranged from 93 to 134 with a mean of 105.3 points. Roeber's group is described as ". . . 133 men and 27 women who were counseled relative to vocational problems. . . . They ranged from 15 to 54 years of age with a median age of 23 years. . . ." (Roeber 1949, p. 598). In order to see whether these populations differed from each other in variability of scores obtained at the time of testing, the reliability of the differences between standard deviations was determined for each of the seven interest scales commonly found in both inventories. Only one significant difference (Business-Clerical) was obtained from the 14 comparisons indicating if significant intra-individual differences on the basis of lower r 's are found in this study that they may be attributed to emotional status and not to greater homogeneity of the NP population.

Results

Table 1 contains the correlations obtained in the present study compared with those given by Roeber in the OII Manual. Since Roeber's form of the KPR-V did not include the Outdoor scale, no findings related to this scale will be presented. Of 81 comparisons 53 or 65.4 per cent (with r 's carried to three decimal places) were lower for the abnormal population; 28 or 34.6 per cent were lower for the normal population. The difference between these proportions is significant ($p < .01$, chi-square test).

Only 7 of the 81 comparisons, i.e. 8.6 per cent, showed significant differences ($p < .05$) between r 's (converted to z values) from the NP and normal groups. Further agreement was noted in that the signs accompanying the r 's were the same in 71 out of 81 instances.

In summary, the data in Table 1 present three points: first, the proportion of lower r 's found for the NP group is significantly greater than for the normal group; second, the signs of the correlations for both groups are generally the same; and third, only 7 out of 81 differences between the groups for any of the scales are significant.

Table 1

Comparison of Correlations between Kuder Preference Record-Vocational and Occupational Interest Inventory Categories for Normals (N=160) and Psychotics (N=100)

KPR-V Scales																			
		Mech.		Comp.		Sci.		Pers.		Art.		Lit.		Mus.		S. S.		Cler.	
		N	NP	N	NP	N	NP	N	NP	N	NP	N	NP	N	NP	N	NP	N	NP
OII Scales	Pers. - Social	<u>-60</u>	<u>-17</u>	-20	-19	-33	-15	15	33	-12	-10	25	18	14	02	63	52	00	05
	Natural	43	37	-10	-20	24	19	-15	-25	-05	04	-22	-20	-26	-25	-04	-06	<u>-16</u>	<u>-40</u>
	Mechanical	<u>76</u>	<u>61</u>	08	00	26	10	<u>23</u>	<u>38</u>	22	11	-45	-20	-26	-10	-35	-16	-13	-10
	Business	-30	-34	40	38	-27	-27	51	48	-36	-32	06	05	00	15	-03	-06	<u>63</u>	<u>44</u>
	The Arts	-57	-41	-38	-33	-52	-32	-02	18	41	42	36	34	43	40	09	-01	-17	01
	The Sciences	37	15	24	37	<u>79</u>	<u>58</u>	-19	-41	-17	-11	-24	-07	-10	-24	-30	-12	-10	05
	Verbal	-70	-62	-11	-08	-53	-56	28	47	-20	-11	<u>70</u>	<u>38</u>	16	19	48	28	20	17
	Manipulative	02	12	08	-03	12	06	-17	-14	14	15	-11	-13	01	-17	01	16	04	14
	Computational	-35	-37	54	56	-04	00	23	15	-33	-34	27	08	-02	00	07	-07	50	39

Note.—Underlined correlations indicate differences significant at .05 level of confidence

However, a surprising finding is revealed by a study of these seven significant differences. Four of them, or 57 per cent, occur in areas which purport to measure the same interests on both inventories. For this reason Table 2, based on similar-interest scales, was constructed and research data were included from two other investigators who employed the KPR-V and OII with normal subjects (Lindgren, 1947; Jacobs, 1951). According to our hypothesis, the NP population's r 's should be lower than those found

in normal subjects. This occurred in 14 out of 21 comparisons; 9 of them significantly so (using the more conservative two-tailed test). Three of the seven instances in which the opposite occurred, none significantly, took place when the NP group was compared with Lindgren's group—the smallest of the three (N=50).

A further perusal of Table 2 reveals another difference between the two groups; namely, the size of the r 's obtained from the NP group differs much more from the normals than does the size

Table 2

Comparison of Correlations for Related Scales between Emotionally Disturbed (NP) and Normal (N) Subjects

KPR-V	OII	Klugman(NP) (N=100)	Lindgren(N) (N=50)	Roeber(N) (N=160)	Jacobs(N) (N=116)
Mech.	Mech.	.61	.72	.76*	.75*
Cler.	Bus.	.44	.74**	.63*	.62*
Sci.	Sci.	.58	.80*	.79**	.75*
Lit.	Verb.	.38	.16	.70**	.34
Art.	Art.	.42	.37	.41	.35
Comp.	Comp.	.56	.50	.54	.60
Soc. Ser.	Pers. Soc.	.52	.60	.63	.58

*Significantly higher than Klugman at .05 level.
**Significantly higher than Klugman at .01 level.

of the r 's of the normal groups from each other. Although this does not hold for the Artistic and Computational scales and to a limited degree for the Verbal, it is especially true for the Mechanical, Business, Scientific and Service scales. Differences between NP and normal populations, based on means however, were noted on an earlier occasion by this writer (Klugman, 1960).

To ascertain whether the experience of having taken an interest inventory a week earlier would affect the results of one taken currently, the mean scores for the twenty scales given first (ten KPR-V and ten OII) were compared with those from the same twenty scales given last. No significant differences were found except for the OII Manipulative scale which, since it is the only one in twenty comparisons, can readily be regarded as a chance occurrence.

Discussion

Theoretically, the obtained data employing interest inventory results support Patterson's statement as measured by frequency of lowered correlational findings, "that the intra-individual variability of emotionally disturbed subjects is greater than that of normals. . . ." This conclusion thereby contributes to Fiske and Rice's search for "personality correlates of variability" and their "relationships with neurosis and psychosis."

Although it was shown that there was generally high agreement between the two validity matrices in terms of sign and size of correlation, there were some instances of significant difference between r 's. Of seven interest areas commonly measured by both inventories four yielded r 's which were significantly different. Since counseling psychologists are more interested in extent of agreement between two inventories which claim to measure the same rather than different interest areas, e.g. Scientific-The Sciences rather than Scientific-The Arts, observation of differences among the similar-interest type of comparisons suggests some special consideration. It would seem, in light of greater intra-individual variability among the emotionally-disturbed, that adoption of Patterson's recommendation is in order, namely, that "the comparison of results of two testings will

be of value in estimating the client's functioning and ability" (Patterson, 1958, p. 250). Such a procedure would reduce the chance of testing an emotionally-disturbed person on a day when he happens to be at the "crest" or in the "trough of (his) wave" of ability or interest (Bradford, 1920, p. 295). Furthermore, in obtaining two scores for an interest area it is not only that one gets a more accurate evaluation but also there is revealed by the patient a clue as to the presence or absence of emotional stability. Further counseling will determine whether an area which shows variability should continue to be considered seriously.

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A Note on Some Basic Concepts

Psychotherapy, and especially counseling, are notably lacking in a sound theoretical structure. We are much better at saying what we don't do than what we do, and why we do it.

Freud had a theory that tied in closely with his therapy—the neurotic had been badly brought up and the task of the therapist was to regress him to childhood and then bring him up right, with the therapist taking the role of the Good Parent.

This, of course, meant an heroic effort, over years, for both the therapist and the patient.

Rank, on the other hand, emphasized the present adjustment and explored the past only as

¹This writer is indebted to Dr. James Diggory, Psychology Consultant to this hospital from the University of Pennsylvania, for his helpful suggestions in the writing of the article.

it interfered with the present adjustment. Rogers saw the therapist as a sounding board, a passive and permissive listener, whose function was to encourage the expression of negative feelings. As a result of this catharsis, more positive feelings were freer to develop.

Underlying all these points of view is the assumption, derived from abnormal psychology, that a person who is "disturbed," who has "emotional" problems, is a person in an unhealthy state. We describe him by the opprobrious term "mal-adjusted." On the other hand, our concept of the "well-adjusted" person, who never has any conflicts, any anger or anxiety or depression, is coming more and more to resemble the bland conforming other-directed robot we are all getting so fed up with.

I am beginning to wonder whether people have "emotional" problems. The emotions I have observed seem appropriate to the individual's perception of the situation he is in; if he is able to arrive at a new perception, his emotions change to fit the new perception. The real job of the counselor is not to deal with people's emotions, but with their perceptions of past and present events.

In the second place I question whether an individual in a state of anxiety and confusion and turmoil is necessarily in an unhealthy psychological state.

"I've made a discovery," one of my favorite youngsters told me last year. "The times when you're sailing along on top of the world, no sweat, everything going your way—you're not getting anywhere. But when you're miserable and lost in the dark and even the simplest thing seems to go wrong—then you're really making progress. Then you're really growing."

I am wondering if it is not time for us to recognize that the struggle involved in growing—integrating new experiences into our lives, and re-integrating old experiences into a more harmonious pattern—is a basically healthy process, for all the misery and turmoil involved, and not a symptom of sickness.

It is currently fashionable for psychologists to be interested in the mystical experience. Less emphasis, however, has been placed upon the stages by which an individual as a result of such an

experience, tears down his old pattern of life and re-builds and re-integrates an entirely new pattern. An important one of these stages is "the dark night of the soul," a period of extreme mental anguish. The writers on this subject state that it is during this "dark night" that the transformation takes place.

In psychological studies of learning, we see this same process. In a complicated learning situation, when a new skill is introduced, it is not simply glued on to the old skill. The old pattern has to be broken down, performance gets worse, and there is frustration, discouragement and anger. Then, the whole pattern of performance is re-integrated with the new skill a part of it. The same thing happens in the field of perception when a new element is introduced into an old pattern; the pattern is first disrupted and then re-synthesized.

It would, of course, be wrong to lump all disturbed people in the same category. The morbid disintegration of the schizophrenic and the necessary and healthy disintegration of the growing individual should be carefully discriminated. But it is as unfair to call the second "sick" as it would be to call the first "healthy."

If we recognize that in some, if not in many, of the people we see, anxiety and tension are not the problems but the normal by-product of the healthy process of growth, we may be able to develop new techniques designed to speed up this process. Dr. Dreikurs suggests that we study Plato's dialogues to learn the skills involved in the Socratic method, a method of clearing away the debris of false assumptions. Perhaps it is time for us to consider whether we should take a more active role in helping to clarify the questions the individual is asking himself.

The young man I quoted above will never be "well-adjusted." He will never be contented or bland or happy. He will frequently be in doubt and turmoil and confusion and misery. But he has the potentiality of becoming a human being of complexity and wisdom, of depth and breadth and richness.

Is he sick?

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Comment on Stimulated Recall in Therapy Using Video Tape

The Fall, 1963 issue of *J. Counsel. Psychol.* presented Kogan, Krathwohl and Miller's account of use of video tapes in conjunction with psychotherapy. In the method presented, following an interview the client and counselor viewed a playback separately. Each was joined by interrogators who elicited the participants' reactions to the playback.

The technique was recommended as potentially capable of accelerating psychotherapy, in addition to serving as a means of exploring the dynamics of the counseling process. The authors note that the method permits "a breakdown of the usual defenses in interpersonal communication," and "introspection by all parties involved in a

given communication at critical points of the interaction process."

I should like to comment on one point of methodology only, as it relates to the hoped-for use in accelerating psychotherapy. This is the procedure of presenting the interview playback separately to counselor and client.

Some years ago, while training in a VA neuro-psychiatric hospital, I was introduced to the use of amytol interviews as a means of facilitating patient communication and affective expression. The interviews were used largely as a diagnostic or exploratory tool by means of which the patient communicated to staff what otherwise might have been unavailable for staff consideration. I felt considerable reluctance about so using the interview. The reluctance rested on belief that the patient's communications belonged primarily to himself, and that the material of his own life was primarily for his own use, not that of others. On the other hand, my observation of amytol interviews with severely disturbed, hospitalized persons led also to belief that the communications so elicited had real value to those who would assist the patient therapeutically.

A resolution of the wish to make use of the amytol interview, and the simultaneous lack of inclination to deny the patient knowledge and use of his own communications, presented itself in the playback method. At a point in therapy where I felt that there would be value in eliciting freer communications by means of amytol, I would suggest this possibility to the patient, assuring him that the interview would be tape recorded for our later use. The procedure we followed was to listen to the tape together afterwards, exchanging our comments and questions and introspections. We kept the tapes on hand after this initial review, and would sometimes return to a section that had become meaningful or relevant in a new way, or that had returned to puzzle us.

While my assessment of the value of this method is totally impressionistic, the impression was that it had values which were not dependent on the specific contents made available to us in the amytol interview. These values include presentation of the therapist to the client as one who is in a clearly collaborative, inquiring role, not that of one to whom solutions are foreseen. The procedure made operationally clear our mutual responsibility, and our dependence on the perceptions and contributions of one another, and helped create a functional closeness as co-workers. That I had no "private knowledge" of the patient, and wanted none, I believe helped establish in his feelings about himself the respect I felt for his integrity as an individual.

It would appear that some of the same values are inherent in the video-tape method reported, by reason of the client's having the interview record made available to him for his own further consideration. However, the separate presentation

to client and counselor would also seem to obviate a measure of the mutuality and role interactions which seemed a prime value of the procedure of reviewing a tape record together.

Exploration, both theoretically and through clinical trial, of the implications of separate as compared with collaborative interview review might well help bring into focus the implications of our more usual procedures. On what basis, for example, does our traditional reservation to the therapist of analysis of the history of a psychotherapeutic series rest? What is the meaning to the client of the closed clinical file? What are the actualities of the counselor-client role functions, as compared with the theoretical ideals? What contributions might we be making to client defensiveness (exclusiveness about his own thoughts and feelings) by reserving to ourselves (or restricting our sharing of it to a collaborator other than himself, e.g. supervisor, trainer, consultant) a part of our reflections on what he has already offered us for therapeutic use?

Such questions as these bear consideration, I believe, as new methods such as the video-tape interview review are explored.

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To the Editor:

Upon reading the winter issue of the *Journal of Counseling Psychology* (1963), I was struck by the impulse to profess openly the view that I privately hold: I like the *Journal*!

Perhaps, because recent national events have prompted an inventory of social and personal values; perhaps, because the contributions by E. K. Strong, Jr. have become heirlooms; perhaps, because changes of the *Journal* editor, book review co-editor, and research co-editor suggest another developmental stage for the *Journal*; perhaps, because of these and other reasons, it is appropriate to comment on the personal impact provided by this issue.

It seems that the Upper-Middle Class status (Granger, this *Journal*, 1959) of the counseling psychologist (within the ranks of psychological workers) is not consonant with the Upper-Upper Class status of the *Journal* (within the ranks of psychological journals.) If this is so, then the status of the *Journal* must be due to factors other than the status of the profession alone. In the opinion of this observer, the credit belongs, in large part, to Professors Pepinsky, Super, Wrenn and others, for their continued stimulation, evidence, wit and wisdom for our daily bread-and-butter activities.

In this issue, "Directions in Counseling Psychology," "Comments on Current Books and the Passing Scene," and "On the Utility of Bias in Treatment" are typical of the broad but precise

observations, the accurate but concise descriptions and the critical but humane evaluations which characterize these writers. The prediction of future trends, the announcement of the Greyston Conference and the discussion of research on client-counselor convergence and experimenter bias—all are fitting fare for New Year palates.

Well, sir, this letter was to represent a reaction, not an abreaction. May it offer kudos to Drs. Pepinsky, Super and Wrenn, and best wishes to you and your colleagues in the tasks ahead.

R. Leo Sprinkle
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To the Editor:

In the Fall 1963 issue, Leona Tyler questioned whether counseling should not be less problem centered than it frequently is. She suggested that counselors might purposely create emotional conflict or anxiety in clients as stimulants to growth and, correspondingly, that the initial step toward counseling might not always be left up to the client. With these points I heartily agree. I think I as heartily disagree on another point, although pursuit of the issue might show us to be not as far apart as we seem.

Tyler urges that we "invent new ways of stimulating boys and girls to think deeply about values, about the creative use of time and personal resources, about life tasks in a broad sense." In the same paragraph she suggests "renewed emphasis on vocational counseling" as a "step in

the right direction," but I'm not at all sure why she suggests this. My own view is that the stimulation of adolescents and post-adolescents toward further growth would not be promoted by more vocational guidance.

Both high school and college students are deeply concerned about values and about the meaningfulness of alternative or competing life tasks. They also are disturbed, I think, at the relative shallowness of the question to which society demands they give their major attention, "Should I be an accountant or a pharmacist?" The students who refuse to be concerned with occupational decisions when they are trying to find major value patterns to which to commit themselves seem more mature than the counselors who want them to decide between business administration and teaching.

While students wrestle with major developmental problems, society—and counselors too—asks them to give their attention to questions of a narrow, mundane, materialistic nature. Those students not mature enough to recognize the immaturity of society's demands are troubled at their inability to do what their elders ask. Would you worry over whether to wear a blue tie or a brown one while the house is burning around you? And what would you think of onlookers outside the window shouting advice about color combinations while they urge you to get the tie tied?

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Test Reviews

The California Psychological Inventory: I. As a Measure of the Normal Personality

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This is the first of two special reviews on the *California Psychological Inventory* (CPI) as a measure of (1) the normal personality and (2) the personalities of personal adjustment and vocational-educational clients. The purpose of the reviews is to integrate some of the accumulated research on one of the few instruments which has been developed for the assessment of the normal personality and to identify the ways in which clients differ in their personality characteristics from the normal pattern. Although counseling psychologists profess a special interest in the normal personality, they have conducted very little research on the measurement of normal behavior and have had to adapt instruments designed for other purposes, e.g., the MMPI, to the counseling situation (Drake & Oetting, 1959). The *Edwards Personal Preference Schedule* and the *Guilford-Zimmerman Temperament Survey* are no exceptions, since most of the research on them, particularly the social desirability studies of the former and the factor analyses of the latter, has dealt with their internal characteristics as psychometric devices rather than their usefulness as measures of the normal personality. About the only personality inventory which has been studied extensively enough both internally and externally to indicate its promise for the appraisal of the normal personality is the *California Psychological Inventory*.

The CPI has been referred to as a "normal" MMPI, not only because it contains 200 items from the latter but also because it was developed largely in the same way, by the empirical method of test construction. All but four of the 18 CPI scales were constructed by selecting items which differentiated between high and low groups on some relevant criterion dimension, such as dominance or sociability. The other scales were formed through internal consistency analyses and are scored according to rationally derived keys.¹ Originally, the scales were grouped into the four general classes listed in the first column of Table 1 on

the basis of an inspectional analysis of their intercorrelations, but subsequent studies have raised several questions about the cogency and validity of these categorizations. As Nichols and Schnell (1963, p. 228) have pointed out, they may be due to any one, or combination, of the following three possible sources of common variance in the CPI scales, only the first of which would indicate behavioral interrelationships: (1) "Common variance between scales may represent common variance in the traits the scales purport to measure"; (2) "Common variance between scales may be due to some aspect of item response that is related to the traits which both scales purport to measure, but which is not dependent on any correlation among the measured traits," e.g., social desirability response style; and (3) "Common variance between scales may be due to common response tendencies which are not related to the traits which the scales purport to measure," e.g., acquiescence response set. An additional factor which may produce a spurious common variance among scales, and one which must be controlled in research on their intercorrelations, is item overlap. Since most of the scales were constructed from the same item pool, many of them have items in common and consequently are related to each other because they are not experimentally independent.

Through factor analyses of the CPI, and studies of its validity, it has been possible to isolate some of these sources of common variance in the scales and to draw some inferences about the structure and functioning of the normal personality. Three factor analyses have been published, and several unpublished ones have been conducted (Nichols & Schnell, 1963), all of which have yielded remarkably similar findings, despite differences in subject characteristics and methods of analysis. From the reported studies, the results for two of which are presented in Table 1, it seems justifiable to draw the following conclusions:

1. In all of the studies, the factorial structure of the CPI appears to be essentially the same for males and females. Crites, et al. (1961) compared the variance-covariance matrices for males and females on all scales and found no sex differences. Nichols and Schnell (1963) performed separate

¹A possible exception to this statement is the Communality scale which is keyed to the modal responses of the standardization samples to a set of 28 items.

Table 1
Results of Factor Analyses of the California Psychological Inventory (CPI)
by Mitchell and Pierce-Jones (1960) and Nichols and Schnell (1963)

CPI Scales		Mitchell and Pierce-Jones (1960)				Nichols and Schnell (1963)					
		I	II	III	IV	I		II		III	
Class						M ^a	F ^b	M	F	M	F
Class I. Measures of Poise, Ascendancy and Self-Assurance											
	1. Dominance	18	76	04	-09	28	23	63	74	-18	-11
	2. Capacity for Status	21	59	04	50	37	39	60	68	20	21
	3. Sociability	27	78	04	15	22	31	78	79	-14	-06
	4. Social Presence	-01	62	-23	51	00	10	71	73	27	36
	5. Self-Acceptance	-17	77	08	05	-08	-06	74	77	-14	04
	6. Sense of Well-Being	79	16	05	23	70	78	23	25	07	-02
Class II. Measures of Socialization, Maturity and Responsibility											
	7. Responsibility	58	09	44	21	68	67	10	18	-10	-14
	8. Socialization	43	02	57	-06	58	55	-04	02	-25	-33
	9. Self-Control	92	-19	08	-01	83	87	-26	-24	05	-15
	10. Tolerance	67	11	15	54	71	74	20	32	34	22
	11. Good Impression	83	08	-08	-06	77	75	-05	05	06	-13
	12. Communality	02	06	58	-02	20	22	16	17	-38	-36
Class III. Measures of Achievement Potential and Intellectual Efficiency											
	13. Achievement via Conformance	80	25	23	08	79	75	19	23	-09	-25
	14. Achievement via Independence	47	02	11	67	48	55	09	19	62	49
	15. Intellectual Efficiency	46	24	16	53	58	66	51	48	20	20
Class IV. Measures of Intellectual and Interest Modes											
	16. Psychological Mindedness	47	22	-16	32	45	49	14	27	35	28
	17. Flexibility	-12	02	-25	56	-01	01	02	05	71	67
	18. Femininity	-02	-02	45	-04	14	09	-24	-18	-02	-27

^aMales^bFemales

Note.—Loadings of $\pm .30$ or more were used to interpret the factors.

factor analyses for males and females, but the results were quite similar. And, Mitchell and Pierce-Jones (1960) obtained comparable findings on a sample comprised primarily of females.

2. Due to their item overlap and statistical intercorrelations, it is not necessary to use all of the CPI scales to measure the traits they supposedly define. Crites, et al. (1961) found that a reduced set of six scales accounted for most of the reliable variance (66%) in the remaining 12, and Nichols and Schnell (1963) have developed two scales which represent the major clusters in their factor analysis, although they note that some of the standard scales may be useful for specific purposes.

3. Finally, with only slight inconsistencies due to differences in methods of analysis (centroid vs. principal components), the factor analyses have yielded almost identical groupings of the CPI scales, which agree with the original classes, however, in only two instances.

The factors which emerged from the three studies are depicted graphically in Figure 1. The larger circles represent the factors and the smaller ones the various CPI scales. Scales which are located between two factors have loadings on both of them. The correlations of the second-order General Factor with Factors I, II and IV are indicated by the broken lines; the absence of a broken line connecting Factor V with any other factor or scale signifies that it is an unrelated specific factor. The adjectives within the circles characterize the ways in which high scorers on the various scales are seen by others (Cough, 1957, pp. 12-13) and have been used, along with other validity data, to make the following descriptions and interpretations of the factors:

Factor I. The Self-control, Achievement via Conformance, Well-being and Good Impression scales define this factor, in combination with the Socialization and Responsibility scales, which also load on Factor III, and the Tolerance, Achieve-

ment via Independence and Psychological-mindedness scales, which are also related to Factor IV. Factor I corresponds most closely to the CPI Class II scales, with the exception of Communitarity, and has been named *Adjustment by Social Conformity* by Mitchell and Pierce-Jones (1960) and *Value Orientation* by Nichols and Schnell (1963). Crites, et al. (1961) have interpreted the factor as a *mode of adjustment* which involves adaptations of the self to reality through an attitude of compliance, cooperation and conformity. The adjectives which describe high scorers on the four primary scales (Sc, Ac, Wb, Gi) that make up the factor also suggest Horney's (1950) *Self-effacing* personality, who moves toward others in interpersonal relationships, and possibly Heath's (1959) *Non-comitter*, who is constricted and underreactive in his associations. It is important to note, however, that as adjectives from any one of these scales, or those which are loaded on Factors III and IV, are added or subtracted the personality construct defined by Factor I changes accordingly. Thus, it may vary between the extremes of the markedly introverted person, whose highest score is on Self-control, to the sociable, warm individual, whose highest score is on Good Impression. These variations are reflected in the correlations of Factor I, as measured by a specially prepared scale (Nichols & Schnell, 1963), with the following inventories: MMPI: $K = .53$, $L = .49$; EPPS: Deference = .32, Endurance = .40, Aggression = -.35; GZTS: Objectivity = .70, Friendliness = .58, Personal Relations = .59.

Factor II. The basic scales which comprise this factor are Dominance, Sociability and Self-acceptance; they are supplemented by Capacity for Status and Social Presence, which are also correlated with Factor IV. With the exception of the Well-being scale, all of these scales are included in CPI Class I. The factor which they define has been called *Social Poise or Extroversion* by Mitchell and Pierce-Jones (1960) and *Person Orientation* by Nichols and Schnell (1963). Crites, et al. (1961) have referred to it as a *mode of adjustment* which reflects an inclination to master and control people and things. The adjectives which characterize people who score high on the factor's scales are consistent with Horney's (1950) *Expansive* personality, who moves against others, and Heath's (1959, p. 6) *Hustler*, who "deals with conflicts aggressively" and "seizes each new situation for opportunities to demonstrate his worth and superiority over others." Nichols and Schnell (1963) found that a scale based upon this factor correlated with other tests as follows: MMPI: $D = -.36$, $Si = -.66$; EPPS: Dominance = .39, Exhibition = .37, Abasement = -.49; GZTS: Ascendancy = .61, General Activity = .35, Sociability = .59. Vocationally, the personality defined by Factor II would most likely be motivated by *Behavior Control* expressed in a sublimated form, possibly through a social service occupation (Crites, 1961; 1963).

Factor III. Only the Communitarity scale is loaded on this factor alone; the Socialization and

Responsibility scales are also related to Factor I. In the study by Mitchell and Pierce-Jones (1960) Femininity was included with these scales to define a factor which they termed *Super-ego Strength*. Nichols and Schnell (1963) do not discuss the significance of any of these scales, but their data show that they constitute one end of a bipolar factor, the other end of which is loaded on the Flexibility, Tolerance and Psychological-mindedness scales. Using the centroid instead of principal components method of factor analysis, Crites, et al. (1961) found that Communitarity, Femininity and Flexibility each defined unique factors. They concluded that the latter two scales probably measure highly specific attitudinal and trait dimensions and that the Communitarity scale most likely assesses the tendency to make "modal" responses to the CPI, as stated in the Manual (Gough, 1957). The adjectives listed for Factor III would tend to support this interpretation, but it should be noted that the Socialization and Responsibility scales are part of this factor, in addition to Communitarity. In other words, it may be that Factor III represents a personality construct rather than just test response set; however, further research is needed to settle this question. One hypothesis which is consistent with the validity of the Factor III scales is that, in combination, they may measure a personality sub-type, such as Horney's (1950) "resigned" individual or Heath's (1959) "submissive constricted" person, rather than a major personality construct.

Factor IV. Flexibility is the one scale which clearly represents this factor, but Tolerance, Achievement via Independence, Psychological-mindedness, Capacity for Status and Social Presence also make their contributions to it. As mentioned in the discussion of Factor III, this fourth factor was identified as a separate construct only in the factor analysis by Crites, et al. (1961). In the study by Mitchell and Pierce-Jones (1960) it was considered as part of a factor which they called *Capacity for Independent Thought and Action*. Nichols and Schnell (1963) offered no interpretation of the bipolar factor on which Flexibility loaded. When the adjectives which describe Factor IV are considered, they suggest a creative, resourceful personality with wide-ranging interests and idealistic values. The person who scores high on the scales which comprise this factor might well fit into Horney's (1950) "rebellious" group, which expresses its discontent with the restrictions of life by striving for freedom both from conflict within the self and from restrictions imposed by the environment. Another possible prototype for this factor is Heath's (1959, p. 7) *Plunger*, who is characterized as follows: "He plunges right ahead. Consequently, he frequently gets himself over-extended"; "Today he might feel on top of the world ready to commit himself to anyone or anything that looks interesting and exciting. Tomorrow we might find him bitter, sad, and alone"; "He has difficulty maintaining both interest and affection. He works and he loves in spurts"; "This condition in turn often results in a com-

elling search for an integrating scheme or philosophy with which he can more comfortably live with himself." In short, the Factor IV person has considerable promise and potential, but fails to fulfill it, because he is impulsive and moody and scattered.

Factor V. This is the one factor of the five which appears to be almost wholly specific in nature, but this is not too surprising, since it is defined solely by the Femininity scale, and measures of masculinity-femininity seldom correlate with other variables (Heston, 1948). There is some evidence (e.g., Drake & Oetting, 1957), however, that they may act as moderator variables in the differentiation of groups or the prediction of a criterion (Gheselli, 1963). In other words, the Femininity scale may be useful in sharpening the definition of the other factors by maximizing the differences between them. As the adjectives for Factor V reveal, high scores are associated with more feminine characteristics and low scores with more masculine traits. Thus, if high scores on this factor are combined with high scores on Factor III, for example, the differentiation of the latter from the other factors might be increased, since one effect of a moderator variable is to reduce within group heterogeneity which obscures between group differences.

The *General Factor* defined by the Intellectual Efficiency scale was specifically identified and noted only in the study by Crites, et al. (1961), but, as the data in Table 1 show, it was also present to greater or lesser degree in the factor analyses by Mitchell and Pierce-Jones (1960) and Nichols and Schnell (1963). The reason for this difference among the studies is that in the former one the factor analysis was supplemented with a multiple regression analysis, in which the scales that best defined the first-order factors were combined as a linear composite to predict scores on each of the other CPI scales. From this analysis, it was apparent that the Intellectual Efficiency scale was significantly related (.01 level) to most of the scales in the CPI, including Good Impression, Dominance and Flexibility, which represent Factors I, II and IV, respectively. The only scales which were not related to Intellectual Efficiency were Communality (Factor III) and Femininity (Factor V). On the basis of these relationships and evidence from other studies on its validity, Crites, et al. (1961) concluded that the Intellectual Efficiency scale may measure a general level of adjustment factor or what might better be named *Ego-strength*. Not only is there an intellectual component in the Intellectual Efficiency scale, as indicated by its moderate positive correlations with measures of intelligence (Gough, 1957), but there is also an adaptive component, as revealed by its relationships to Factors I, II and IV which define different modes of adjustment or personality patterns. If this interpretation of the Intellectual Efficiency scale is correct—and it is still subject to further confirmation—one implication is that each of the factorially defined personality constructs can lead to effective, and

hence presumably satisfying, life adjustments. Another implication is that a combination or composite of the attributes of the constructs might lead to an even higher level of personality integration than is usually attained through any one adjustment pattern.

Some data relevant to this hypothesis were gathered in a study by Heilbrun, Daniel, Goodstein, Stephenson and Crites (1962), in which groups of Ss with the possible combinations of high and low scores on the Dominance and Good Impression scales were compared on the adjectives that they endorsed as self-descriptive. The four personality types which emerged from the analysis, and some of the adjectives which describe them, were as follows:²

1. "Benevolent Leader" (high Do-high Gi): active, adventurous, ambitious, confident, foresighted, industrious, patient, resourceful, strong, talkative.
2. "Malevolent Dictator" (high Do-low Gi): aggressive, clever, egotistical, humorous, intolerant, outspoken, sharp-witted, talkative.
3. "Nonentity"³ (low Do-high Gi): forgetful, friendly, painstaking, stern, strong, thrifty.
4. "Disgruntled Recluse" (low Do-low Gi): bitter, confused, dissatisfied, emotional, inhibited, moody, preoccupied, restless, touchy, withdrawn.

The "Benevolent Leader" types endorsed adjectives as characteristic of themselves which indicate considerable ego-strength, and, being high on both Dominance and Good Impression, they would also be high on Intellectual Efficiency, which is positively correlated with these scales. At the other end of the continuum of *Ego-strength*, the "Disgruntled Recluse" types see themselves in terms which belie a poor general adjustment status. Between these extremes, the "Malevolent Dictator" and "Nonentity" types describe themselves in ways which suggest an average level of adjustment: they have positive attributes (humorous, friendly) but also some negative ones (intolerant, forgetful). Thus, there may be at least two dimensions along which the normal personality may vary and be described: the categorical one of personality construct or type, as defined by the first-order factors in the CPI, and the continuous one of ego-strength, as defined by the Intellectual Efficiency scale, which represents a general factor in the CPI.

These findings and inferences from the factorial and validity studies of the CPI might be "fit into" any one of a number of models which have been proposed for the conceptualization of the normal personality (e. g., Erikson, 1953; Maslow, 1954; Seeman, 1959; Shoben, 1957), but they seem to be most consistent with a two factor

²This summary of results is based upon males only. Females were similar, but there were notable differences.

³This type was originally referred to as "He always seems like such a nice person—wonder what his name is?"

model of ego functioning formulated by Heath (1959). In this model, one dimension is called *integrative ego functioning*, which would correspond to the general factor of *Ego-strength* represented by the Intellectual Efficiency scale of the CPI, and the other dimension is *degree of impulse control*, on which the personality types o *Noncommitter* (under-reactive), *Hustler* (counter-active) and *Plunger* (over-reactive) are ordered. Graphically, this conceptual scheme is depicted as pie-shaped, with the radii representing the dimension of integrative ego functioning and the perimeter the dimension of impulse control. At the point of intersection of the radii is located the personality construct called the *Reasonable Adventurer*, the counterpart of which on the CPI would be the "Benevolent Leader" type. Some of the characteristics which Heath (1959, p. 5) attributes to the *Reasonable Adventurer*, who is a paragon of integrative ego functioning and appropriate impulse control, are as follows: "Future orientation, but in a sense of life as a game rather than life as a struggle"; "Formation and maintenance of close friendships among his peers"; "Tolerance of ambiguity"; and, "A lively but benign sense of humor." There are some inadequacies in this model of the normal personality, such as the position of the *Reasonable Adventurer* on the dimension of impulse control, which does not pass through the intersect of the radii in the pie-shaped scheme, but in general it jibes with the data on the factorial structure of the CPI and provides a meaningful theoretical framework for its interpretation.

Conclusions

As a measure of the normal personality, the CPI has considerable promise, but it also has some shortcomings, as Cronbach, Thorndike and others have pointed out (Buros, 1959). Not the least of these shortcomings has been the excessive number of scales in the CPI, which has made it difficult to interpret conceptually and cumbersome to use in counseling. The factor analyses which have been conducted on the CPI have reduced it to a more economic set of scales, however, and have increased its value for research, theory construction and practical application alike. Further studies of the CPI might well investigate the behavioral correlates of the factorially-defined personality constructs in an essentially normal population and thereby determine the extent to which each of the sources of common variance in the scales is related to non-test criteria of academic and vocational performance, effectiveness in interpersonal relationships, adjustment to periods of stress and strain, etc. New departures in conceptualizing the normal personality might take Heath's model of ego functioning as a starting point and derive hypotheses which might then be tested with the CPI, such as "The *Reasonable Adventurer* comes from a familial interpersonal atmosphere in which the parents have encouraged self expression and independent action through attitudes of acceptance

and understanding but have also fostered self-discipline and goal direction through the imposition of reasonable limits upon impulse gratification." And, uses of the CPI in counseling might be explored further by considering the implications for counseling goals and plans of the ways in which clients with different problems deviate from the various normal personality types identified in the factor analyses. The next review of the CPI will deal with this problem and suggest some answers to such questions as: What are the personalities of personal adjustment and vocational-educational clients? Why do they come for counseling? And, what is the relationship of their personalities to their problems?

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Book Reviews

Comments on Current Books and the Passing Scene

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"To him that hath shall be given"—the West has climate, scenery, thousands of new people daily—and now the 1964 annual conventions of both P Associations. Why in heavens name the goodies couldn't have been spread out no one will ever tell but the fact remains that the American Personnel and Guidance Association met on San Francisco's Nob Hill March 23-26, 1964 (4,800 strong), and the American Psychological Association will meet in the middle of Los Angeles' teeming empire, September 3-8, 1964. This will serve to impress and confuse Californians as it has the rest of us—17,000 personnel people in six divisions and 21,000 psychologists in 24 divisions and Who is Who? As a side show barker over the years I have explained to open mouthed throngs the differences between counseling psychologists and clinical psychologists—it now gets tougher to do the same on differences between counseling psychologists in schools and school psychologists. APGA's divisions are a little easier to handle now that ACPA (American College Personnel Association) has turned on its education dome light and established a liaison with the Higher Education Association and the American Council on Education. It is clearly educational—but so also are ASCA (American School Counselors Association) and ACES (Association of Counselor Educators and Supervisors) and it would help if they would establish some real affiliation with their educational counterparts such as the National Association of Secondary School Principals, etc., etc.

The Muthard Committee of APA's Division 17 in their report on *The Role of Psychology in the Preparation of Rehabilitation Counselors* (copies from John F. McGowan, University of Missouri, Columbia) comment on the recent development of the American Rehabilitation Counseling Association (a Division of APGA) and the Rehabilitation Counseling Division of the National Rehabilitation Association. This Committee found, as had Patterson earlier, a heavy concentration in psychology in the 31 training programs surveyed—75 per cent of the required work was in courses that were primarily psychological in nature (this was true regardless of whether the major curriculum was located in Education, Psychology, or what have you), 80 per cent of the directors of

programs had their doctorates in counseling psychology, in counseling, or in clinical psychology, etc.

Some help is given in distinguishing between the San Francisco and Los Angeles conventions by two career brochures. *College Student Personnel Work as a Career* was prepared by a committee of the National Association of Student Personnel Administrators (copies from Dean Carl W. Knox, Secretary of NASPA, University of Illinois, Urbana). It is regrettable that in this discussion of student personnel work as a function of a college or university the variety of specific personnel vocations was not described. Certainly 12 to 15 of these are well known—admissions director, registrar, counselor, financial aids officer, etc. This publication limits the field to a six-fold division of work growing out of the Dean of Students' Office—and there are other personnel offices on any campus. I doubt very much that "most persons begin as residence hall or fraternity or sorority advisers or as assistants to the dean with special assignment." How about those who have their initial appointment in student counseling centers, student unions, student employment offices, and several others? Had this brochure been prepared by the American College Personnel Association, which represents many types of college student personnel workers besides the Deans and those immediately responsible to the Dean, the picture given would have displayed more variety. Three or four years ago a U. S. Office of Education survey disclosed something over 12,000 student personnel workers in colleges and universities and the range of titles and of operations was very wide.

Actually there is a better analysis of specialized positions in college student personnel work as well as in schools and public agencies in the 1960 revised edition of Juvenal L. Angel, *Careers in Guidance and Student-Personnel Services* (World Trade Academy Press, Inc., 50 E. 42nd Street, New York City 17). Although this monograph carries along a few old fashioned and confusing anomalies such as "guidance counselor" used interchangeably with "school counselor" even though "guidance" is "handled by classroom teachers in most schools" (the term "faculty teacher" is a good one too!) and the statistics do not go

beyond 1955-56—the confusion is less than in some more specialized accounts and the amount of information provided is very considerable. You may learn about such workers as school counselor, vocational teacher, school psychologist, school social worker, placement counselor, school nurse and occupational therapist. Eleven types of specialized positions in college are listed although only College Counselor is elaborated. Many specialisms are described as adaptable to various kinds of employment settings.

A *Career in Psychology* by Sherman Ross and Robert F. Lockman (American Psychological Association, Washington, D. C., 1963) describes the work of the more than 25,000 psychologists in the United States of whom 35 per cent work in colleges and universities, 25 per cent in federal, state and municipal agencies, 20 per cent in industry, business and other private organizations, 10 per cent in schools, while only 10 per cent are self-employed. A great variety of information is packed into the 32 pages of the bulletin—kinds of work done, ratio of men to women in each field, geographic distribution, (East Central, Middle Atlantic and New England contain 51 per cent of all U. S. psychologists. Are the pickings better in less condensed areas?), highest degrees (64 per cent of men and 45 per cent of women have doctorates). Institutions with APA approved programs in clinical (61) and in counseling psychology (24) are listed (6 of the latter have dual programs in Departments of Psychology and Education). There is information on graduate study, scholarships, and certification both State and ABEPP. All in all, not much is omitted—the organization of APA is described and a reading list suggested!

While the APA bulletin on Psychology as a career refers only incidentally to such a specialism as counseling psychology, Anne Anastasi's *Fields of Applied Psychology* (McGraw-Hill Co., New York, 1964) is most explicit. One section of the book is devoted to this area of work, parallel with sections on personnel, engineering, consumer, and clinical psychology. The final section is devoted to psychology and education, psychology and medicine, psychology and law.

Nor is there any doubt with Anastasi as to the primary nature of counseling psychology—it is vocational counseling at a Ph.D. level. True, the counseling psychologist may engage in *educational, employee, rehabilitation, c'd-age, marriage*, and *personal* counseling but it is the *vocational* aspects of this psychologist's work that are clearest to Anastasi. For this reason her second chapter in the section is on "The Psychology of Vocational Choice."

Anastasi provides one of the clearest statements in print on the distinctions that can be made between counseling psychology and clinical psychology (pp. 431-32.) All that she says has been said before, mostly by Tyler—but seldom so simply

and clearly—"to change basic personality structure and personal constructs" is the aim of clinical psychology while the aim of counseling psychology is "to enable the individual to utilize his present resources most effectively in solving problems." One "focuses on weaknesses to be overcome" while the other "focuses on positive strengths to be developed." An interesting analogy is drawn in suggesting that the differences between counseling and clinical psychology are similar in nature to the differences between client centered and psychoanalytic approaches in psychotherapy.

I tried hard to be unhappy with Anastasi's chapter on the Work of the Counseling Psychologist—I was sure in advance that I would be—but I was unable to develop any marked sense of dissatisfaction. Oh, there were some minor matters—the ten-year old *Journal of Counseling Psychology* was not cited once in the 97 references of the chapter. ("Oh ho!" I thought, "Writing on the subject and has never seen the one journal devoted to her field of inquiry. Gotehal" My unholy glee was short lived. Eleven J.Co.P. articles were cited in the chapter on vocational choice—Borow, Brender, Grigg, Hagen, Holland, Merwin and DiVesta, Minor and Neel, O'Hara and Tiedeman, Roe, Segal, and Tyler—all research proposals or investigations. She has simply done our *Journal* the honor of considering it a research source rather than a professional one.) Her touch on counseling psychology is possibly less sure than on clinical but both are seen as youthful fields marked by an abundance of issues and controversies. "... turbulence and struggle are especially typical of the clinical and counseling areas." (p. 341.) In part this is because counseling and psychotherapy are greatly influenced by human values, by differing perceptions of what is "the good life."

We have dwelt over-long on these two chapters of the book. The total book has good balance, writing is clear and direct, there is an abundance, almost an over-abundance, of citations and references (highly essential, of course, if one author is to cover a diversity of fields), the illustrations are conventionally text-like but clear. In fact, this would be an excellent and substantial text for a general course in applied psychology—if such are still taught. It is good professional reading for any applied psychologist.

The vocational emphasis in counseling psychology is continued by turning to two monographs, John L. Holland, "Explorations of a Theory of Vocational Choice and Achievement: II. A Four-Year Prediction Study," (*Psychological Reports*, Monograph Supplement, 4-V12, 1963) and Archibald O. Haller and Irwin W. Miller, *The Occupational Aspiration Scale: Theory, Structure and Correlates* (Michigan State University Agricultural Experiment Station, Department of Sociology and Anthropology, East Lansing, Michigan, Technical Bulletin 288, 1963.)

Holland's study is the second of a series of studies which test his theory, a first statement of which appeared in this *Journal* in 1959. Praise Allah for a theorist who at once sets to work to test his own theory! (His first theory-testing study was reported in a *Psychological Monograph* and was reviewed by Super, this *Journal*, 1963, 10, p. 207.) His theory, the reader will recall, assumes that a person's previous experiences have resulted in a hierarchy of ways of coping with life, a hierarchy of personal orientations to life around him. A person's vocational choice then becomes an attempt to pick an environment which is congruent with his learned personal orientations. In the earlier study his six model orientations were tapped by his own *Vocational Preference Inventory*. In the second study he uses selected scales of the Strong as follows: the Aviator scale of the SVIB to represent the *Realistic* orientation, Physicist for the *Intellectual*, Social Science Teacher for the *Social*, Accountant for the *Conventional*, Sales Manager for the *Enterprising*, and Musician for the *Artistic* model orientation. The follow up was on 956 Finalists in 1956 Merit Scholarship program from their high school senior year to their college senior year. One set of hypotheses dealt with the extent to which students belonging to a given personal orientation category (i.e. dominant personal orientation is *Intellectual* because highest SVIB scale is Physicist) possess characteristics hypothesized by the model. Another group of hypotheses dealt with (1) The prediction of vocational choice and college major choice by orientation model to which the choice belonged and (2) the stability of the choice made. An interesting variant here is congruency of personal orientation with the model to which the college belonged (using Holland and Astin's *Environmental Assessment Technique*).

Now you have the structure and intent of the study you must go to the Monograph itself for the results! Holland writes economically and no review could hope to summarize results. (Hint—stability of vocational choice and major field choice appears to be a function of the *Intellectual* and *Realistic* personal orientations and of the congruency of personal model to college model.) Holland is good about admitting ambiguity of results or indicating difficulty in measuring the dimensions of his theory. In fact his suggestions of new developments growing out of data analyses are often more exciting than the results themselves. In high degree Holland is both honest and ingenious. If results do not support the hypothesis he will be the first to tell you so and immediately develop three additional lines of inquiry. An imaginative empiricist is an uncommon phenomenon. Beyond this, Holland is getting somewhere with his theory. Follow him up each chance you get—as you should Roe, Tyler, Super, Tiedeman and Gough.

The Haller-Miller bulletin includes a review of the literature and previous research on Level

of Occupational Aspiration. Old friends will be found such as the Strong OL scale and the North-Hatt prestige ratings. Beyond this awareness of earlier work, the study reported has marked originality including a theoretical model of LOA (Level of Occupational Aspiration) and eight hypotheses which are to be tested in the determination of any instrument's ability to measure LOA. The bulk of the bulletin is devoted to the development and standardization of the Occupational Aspiration Scale (first presented by Haller in 1957). The standardization job is thorough and workmanlike but most appealing is their blending of theoretical, statistical, and practical dimensions of the project. Much remains to be done on the scale the authors say—its predictive validity is unknown although its relation to many personal variables, including 16 P-F scores, is shown; its fakeability is untested, etc. The OAS is not yet a counseling instrument. As a research tool it has real promise. Counseling could learn much about the structure of LOA and its correlates by browsing this short study. The important North-Hatt occupational prestige tables are also given a good bit of additional meaning.

To provide a change from the vocational counseling fare of the past few paragraphs attention is called to Vol. 1, no. 1 of *Psychotherapy: Theory, Research, and Practice* which appeared in August 1963. As the title suggests the journal is wide open—it is "not limited to research yet not divorced from it—not limited to brief articles where length is required—open to case reports and actual practice—open to all points of view." These wide perimeters of policy will create headaches for its editor but the product should prove stimulating. The *Journal* is published by Psychologists Interested in the Advancement of Psychotherapy, the Editor Pro Tem is Eugene T. Gendlin, University of Chicago, subscriptions and advertising inquiries to go to Lawrence Bookbinder, 2800 Ewald Circle, Detroit 38. Among the 28 members of the Editorial Board are psychologists who have written for the *Journal of Counseling Psychology* in years past—Arthur Combs, J. McV. Hunt, Sidney Jourard, O. Hobart Mowrer, Julius Seeman, and William Snyder. There are only five articles in this first 48-page issue. A modest beginning but the quality seems excellent.

I found the articles good reading—an analysis of psychotherapy evaluation, a brief research report, a description of a model of a healthy personality, direct and Ellis-like treatment of schizophrenics, and the description of an LSD induced experience. Does my enjoyment in reading this *Journal* disclose me as a frustrated clinical psychologist? Not at all. I concur with the Anastasi differentiation between counseling and clinical psychology. I expect to continue practicing counseling and not clinical psychology, but thinking like a psychologist with many areas of intellectual curiosity. I read this new *Journal* with the same zest that I read Holland. If counseling psy-

chologists propose to be broad in their concerns—the wide range of “normals,” decisions and adjustments, environment as well as psyche, widely varying settings in which to function—then they (we) must be broad in their intellectual interests.

And with so many unresolved issues we cannot eschew seeking answers in such books as both Eugene T. Gendlin, *Experiencing and the Creation of Meaning: A Philosophical and Psychological Approach to the Subjective* (Free Press of Glencoe, The Macmillan Co., New York, 1962) and Arthur W. Staats and Carolyn K. Staats, *Complex Human Behavior: A Systematic Extension of Learning Principles* (Holt, Rinehart and Winston, New York, 1963).

The Gendlin book attempts to relate logical positivism to existentialism in a search for meaning. It is a daring venture and one that is organized to guarantee optimal understanding. The less philosophically oriented can read the substantial introduction chapter and then skip to the final chapter on “Application to Psychological Theory and Research.” Thus fortified he may pick up at leisure the intervening chapters on philosophy. (This procedural suggestion is not the reviewer’s invention—it is the author’s planned attack and is so suggested in the Preface.) There is also a neat Appendix to Chapter I which is placed at the end of the book for those who want to go beyond the 12 pages of Chapter I but with recognition of the fact that some may not wish to do so. Much care has been used to make the book readable—there is, for example, a “brief statement” paragraph at the beginning of each chapter designed to prepare the reader for profiting from the chapter.

This book will open up a new world for some readers—of course it is phenomenological and existential in emphasis. But do not allow those terms to frighten you, timid reader, or disturb you who think otherwise. This book is concerned also with research and the empirical approach—rather it is concerned with what happens before concepts are formed, with how concepts are formed, with those processes which precede the cognitive processes involved in research. It examines the role of feeling in concept formation to the end that “it augments but does not alter, the current methods of positivistic science.”

And what is “experiencing” itself? It “refers to the directly given stream of feelings—a type of observable reference” rather than a construct. “Subjective experiencing is a dimension of events that everyone knows intimately. Every individual lives in his subjective experiencing and looks out at the world from it, and through it.” It is a dimension of existence over and above theoretical constructs and external observations.

In sharp contrast is the Staats’ S-R and R-R book—a solid tome of some 500 pages written as a teachable text. (Gendlin’s is in essay style and less than 300 pages.) Arthur and Carolyn Staats

comprise a husband and wife team which has an impressive list of published research chalked up to their individual or joint credit. Their research has been particularly fertile in the area of language development and this book on the psychology of learning reflects their concern with this area.

The authors appear to be personally in the operant conditioning tradition but their text is a balanced one. Reference to Dollard and Miller, Hull, Mowrer, Osgood, and Spence is made more frequently than is reference to Skinner, and Keller and Schoenfeld—the tally is 81 to 52. In spite of an honest attempt to provide balance the authors show more enthusiasm in describing operant (instrumental) conditioning and the various researches that flow from this source of influence than in describing other approaches. In a beautifully clear 20 pages of text (pp. 35-55) the basic principles of respondent conditioning, operant conditioning, and conditioned reinforcement are set forth. This is a part of an 80 page chapter on “Relevant Principles of Behavior” that is alone worth the price of admission.

This is an unusual book on learning—in fact it isn’t on learning at all but on behavior—for it deals with various personality theories and there is a concluding chapter on the learning process in the treatment of behavior problems. Of course personality is defined as behavior, à la Keller and Schoenfeld, and the self, although discussed, is dismissed as an example of “tacting” (verbally describing without necessarily being congruent with behavior). Behavior treatment is presented in operant conditioning terms—again of course—but this final chapter is a valuable one for the counselor who wishes to see the relationship of this methodology to the counseling process. A wealth of studies is presented, some pertinent to what counselors may consider to be their objectives, some not. “Reinforcers” will have fresh meaning after a reading of this chapter.

The writing style is simple and uncluttered and there is ample research support for most of the text. The learning paradigm graphs leave me cold but fortunately I can get clear meaning from the text. A beautiful learning assist is provided in the form of a summary statement after each section of each chapter.

Brief Reviews. In the brief space left for this issue several additional books will be given thumbnail treatment. Some of these may well be more important than those given more extensive attention earlier. The problem has been to select a reasonable number from the 43 new publications that were on hand at time of writing. (13 more have been received since this writing began! Irv Berg will have some beauties for the next issue.)

Perspectives on the Group Process: A Foundation for Counseling With Groups, written and edited by C. Gratton Kemp (Houghton Mifflin

Company, Boston, 1964) is a scholarly selection of 53 readings from journals and books in psychology, education, sociology and philosophy. This is a foundations book in truth, giving attention to the group as a phenomenon, the group process, and the significant elements of group leadership and group membership. Each of the five major parts of the book and the twenty-some sections has a thoughtful integrative introduction by Kemp. The book hangs together. It provides the kind of reading that should be done by *anyone* who contemplates participation in group counseling or group therapy.

A very different kind of book is *Group Therapy: A Practical Approach* by James A. Johnson (McGraw-Hill, New York, 1963). It is written by a psychiatrist who tells what he does with a group and why. Some early chapters on Group Behavior, the Dynamics of Group Therapy, and the Group Contract contain references to the theoretical and research literature but the usefulness of the book lies in the opportunity to follow one therapist's thinking and to reflect upon his experience. Over 200 pages are given to a careful discussion of what happened to one outpatient group. Each meeting is described with a "theme and dynamics" suggested for not only the total session but for many of the verbatim statements. The therapist is mildly didactic but also reasonably straightforward about his own errors.

Guidance Programs Development and Management by Herman J. Peters and Bruce Shertzer (Charles E. Merrill Books, Columbus, Ohio, 1963) is an impressive compendium of knowledge on the topic. Its 17 chapters and the Appendix on Ethical Standards contain more sheer information on the total range of a school guidance program than any book that I have seen. It is heavily referenced with an author index of almost 350 names, many of them with several studies each. The book is practically useful and clearly written. There are too many quotations from others I feel, for even though these are brief and informative I would like to have the authors more frequently say "This is me." If you like a book that draws from many sources and that organizes ideas in a clear fashion, you will like this latest of the Peters' books on guidance. Some of its chapters are almost "firsts" in such a book—Legal and Ethical Considerations; Budget, Facilities, and Public Support; Guidance Programs in Action (Phoenix; Milbank, South Dakota; Indianapolis; Chico, California; and Michigan City).

Guidance Techniques for Elementary Teachers by Ralph Garry (Charles E. Merrill Books, Columbus, Ohio, 1963) places the focus where I think it should—on the knowledge of pupil development (rather than on techniques) and in the framework of an elementary school's distinctive age group and purpose. For once there are no stepped-down and fallacious conversions from the secondary school program. For once the focus is

on the nature of the child, the "who" and not the "what." Replete with illustrations and short case situations, it is written by a man who respects research and draws upon it in his analysis of the child in Family Relationships, Health and Physical Development, Personal Development, Social Development, School and Community. It is a healthy reaction to the attention that has recently been devoted to slick tricks and impressive procedures.

Personality Dynamics and Development by Irving Sarnoff (John Wiley and Sons, New York, 1962) is a thoughtful exposition of personality development from a frankly psychoanalytical point of view. The author, however, is research oriented in his own right, draws substantially from the field of sociology and cites much research from the field of learning. These characteristics make this a neo-analytic text—and a good one. The writing is clear and it *could* be used for an undergraduate course as the writer suggests—Yale undergraduates, however, not students in Midwest City College. It would be better in a first year graduate course.

In sharp contrast is the collection of 14 essays entitled *The Modeling of Mind: Computers and Intelligence*, edited by Kenneth M. Sayre and Frederick J. Crosson (University of Notre Dame Press, Notre Dame, Indiana, 1963). In the attempt to bring both philosophers and computer scientists into the argument, a lively kind of debate runs throughout the book. The theme is that philosophers might help the computer technologists see that their task is more complex than they dream, that one cannot develop a machine to simulate mental processes that are not yet understood by either scientist or philosopher. And some heavy weights dot the pages of the book—Rapaport, Scriven, Newell, Mackay, Sayre, etc.

A neat small book it is, full to the brim with our accumulated understanding of the creative process—*Creativity: Progress and Potential*, edited by Calvin Taylor (McGraw-Hill Book Company, New York, 1964). This is a summary of the research on the criteria of creativity, predicting it, training for it, etc. The authors are productive, visible men in the field—Taylor, Brogden, Holland, McPherson, Sprecher, and Torrance. The book is a gold mine of information in capsule form, with a bibliography of 725 items.

Counseling Psychology in Japan. In the summer of 1963, the Editor of the *Journal* received a request from Professor Hiroshi Ito of Yokohama National University for permission to reprint in translated form 16 articles from the *Journal of Counseling Psychology* for his third and fourth volumes of *Readings in Counseling Psychology*. Earlier correspondence was examined and the assistance of Dr. Kaoru Yamamoto was secured in translating the prefatory matter for Volumes I and II. The following amazing picture presented itself. Professor Ito expects to publish (this

spring) Volume III of a five-volume series on counseling, each consisting of from 20 to 30 translations from the American literature. Volume I, *Foundations*, (1960) has 18 readings of which five are from *J.Co.P.*; Volume II, *Theoretical Issues*, (1962) has 29 articles of which 22 are from *J.Co.P.*; Volume III, *Processes of Counseling* and Volume IV, *Methodology* (anticipated) will contain 43 articles of which 16 will be from *J.Co.P.* Thus into the Japanese literature goes the theory and research of 58 different American writers (contributing two or more articles each to the first four Volumes are Arbuckle, Bordin, Danskin, Curran, Gendlin, Mowrer, Rogers, Shoben, Snyder, Strupp, Thorne, Williamson, and Walker).

Ito not only has undertaken this enormous task of editing and translation (and a creditable job of translation says Yamamoto), but he has also translated Robinson's *Principles and Procedures in Student Counseling* and Patterson's *Counseling and Psychotherapy*, written two books of his own on counseling and co-edited two others! Earlier (1954) my *Student Personnel Work in College* was translated into Japanese and soon to come is a translation of *The Counselor in a Changing World* by Professor Michael Kobayashi.

Counseling and Counseling Psychology is being introduced into Japan with vigor!

Manuscripts Accepted for Publication

Change in Personality Test Scores During College. Lawrence H. Stewart, University of California. 2-11-63.

Client Preferences for Affective or Cognitive Counselor Characteristics and First Interview Behavior. Harry A. Grater, Michigan State University. 7-1-63.

Relationship of Values to the Perception of Activities Involved in an Occupation. Lois E. Olive, Pittsburgh, Pennsylvania. 7-22-63.

The Relationship Between Values and Perceived Problems. William R. Fishburn, University of Arizona and Paul King, University of Missouri. 7-23-63.

Vocational Interest Characteristics of Abnormal Personalities. G. Derwood Carnes, Veterans Administration Hospital, Houston, Texas. 9-27-63.

Further Validation of a Counseling Readiness Scale. Alfred B. Heilbrun, Jr., State University of Iowa. 10-1-63.

A Factor Analysis of the Occupational Choice Motives of Counselors. Richard E. Schutz and Gilbert E. Mazer, Arizona State University. 10-11-63.

Anxiety Level, Need for Counseling and Client Improvement in an Operational Setting. Raymond A. Ehrle, U. S. Employment Service and Charles D. Auvenshine, University of Kentucky. 10-14-63.

Self-Concept of College Women Compared with Their Concept of Ideal Woman and Men's Ideal Woman. Anne Steinmann, New York Clinic for Mental Health, Joseph Levi, New York, New York and David J. Fox, Teachers College, Columbia University. 10-23-63.

The Effectiveness of Two Study Habits Inventories in Predicting Consistent Over-, Under-,

and Normal Achievement in College. Paul A. De Sena, John Carroll University. 10-29-63.

Cross-Cultural Communication and the Semantic Differential. E. R. Oetting, University of Alberta, Canada. 11-13-63.

Three Dimensions of Counselor Encapsulation. Norman Kagan, Michigan State University. 11-15-63.

Innovations in Counseling. Thomas M. Magoon, University of Maryland. 11-22-63.

A Comparison of Student and Professional Prestige Ranking of Jobs in Psychology. Thomas L. Porter and Thomas E. Cook, University of Missouri. 11-22-63.

Effects of Brief Vocational Counseling on Temporal Orientation. Norman J. Matulef, Washington University and Roy E. Warman and Timothy C. Brock, Iowa State University. 11-27-63.

Counseling and the Ages of Man. Albert S. Thompson, Teachers College, Columbia University. 12-4-63.

The Current Status of Counseling Psychology. Ralph F. Berdie, University of Minnesota. 12-9-63.

Psychotherapeutic Improvement as a Function of Communication and Adoption of Therapist's Values. A. W. Landfield and M. M. Mawas, University of Missouri. 12-17-63.

Ideology and Counselor Encapsulation. Milton Schwebel, New York University. 12-20-63.

Effects of Different College Environments on the Vocational Choices of High Aptitude Students. Alexander W. Astin, National Merit Scholarship Corporation. 12-27-63.

Counselor Competence, Interest, and Time Perspective. Jerome M. Sattler, University of North Dakota. 1-6-64.

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The Productive Years of Counseling Psychologists

The age at which the Ph.D. is earned has increased over the past decades, mostly due to increased requirements for the degree and to intervening activities such as serving in the armed forces. Because psychology doctorates are presently (1950-57) earned at 31 years of age, Pressey believes that some creative years are lost. While it might be argued that graduate work and creative professional contributions are not antithetical, few students are active in professional organizations or publish before the Ph.D. degree is earned. Clark found that "significant contributors" took only four years between the baccalaureate and doctoral degrees vs. seven for psychologists-in-general. Pressey notes that 25 recent APA presidents typically earned their doctorate at 25.7.

Since Division 17 members tend to earn their Ph.D. even later (Yamamoto says the median is 36 years of age), our own field has a particular problem. Many factors contribute to this age difference. Since our field is relatively new, many individuals come into it after starting in a different field, e.g., teachers, industrial workers, ministers, etc. Also contributing here has been the tendency to fill many counseling and personnel positions with persons of subdoctoral training who later see the need for education at higher levels. Finally when teaching certification and experience are required before an individual can go on to earn his graduate degree, years are added to preparation.

This extension of graduate training seems likely to continue because increasing emphasis is being given to the importance of internship training in a variety of situations. The new V.A. stipend program requires almost half-time internship involvement as long as a student stays on their rolls. And since most counseling psychologists seek employment in university settings additional internship requirements there seem likely to lengthen the Ph.D. program to a minimum of five or six years. Are we beginning to turn out people who are past the peak of their contributing years? Peterson and Featherstone found that one-fifth of present graduates of APA-approved counselor-training programs do not belong to APA and three-fifths of the rest do not bother to join *any* division of APA; Kelly has noted that three-fourths of Division 12 members do no research at all. Parenthetically it might be noted that back in 1951 the median age of the leaders of our field was only 38 (Northwestern Conference participants).

As professional statesmen we need to change this trend. Can a public relations program be developed so undergraduates become aware of our field earlier and so cut down on detours? Can graduate training programs be changed so students are encouraged to participate in professional organizations, do research and publish articles before graduation? Can many types of prerequisite work experiences of indirect value be eliminated? Attention needs to be given to starting the contributing lives of counseling psychologists much earlier.

F. P. R.

Change in Personality Test Scores During College

Lawrence H. Stewart
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A study was made of changes in personality test scores on 3 inventories over a period of 4 years. The Strong Vocational Interest Blank, the Allport-Vernon-Lindzey Study of Values and the Omnibus Personality Inventory were administered to a group of college freshmen and to the same group as seniors. Multivariate procedures of analysis indicated highly significant changes in means over the 4 years while the factor structure underlying the inventories remained relatively constant.

Perusal of relevant literature indicates a surge of interest in relationships between nonintellective personality characteristics, as measured by inventories, and several aspects of college success. This interest appears to center around two main types of relationships. One type deals with the relationships between personality characteristics and choice of college, nature of educational and vocational goals and success of students in attaining these goals. Little research evidence is available on this type of relationship, although it is a major focus of studies now being conducted by the Center for the Study of Higher Education of the University of California, and earlier, at Vassar College (Sanford *et al.*, 1956).

A second type of relationship involves the possible effects of the college experience on the personality characteristics of students. That is to say, during the college career, are there meaningful changes on variables measured by personality inventories? Two major reviews of studies bearing on this question have resulted in quite different conclusions. After an exhaustive survey of the literature on change in college students, Jacob (1957) reached the rather pessimistic conclusion that the col-

lege has little impact on values and personality attributes. In a more recent review, Webster *et al.* (1961) concluded that there are systematic and meaningful personality changes occurring during the college years.

The present report is based on a longitudinal study, begun in 1957, of the correlates of changes in a group of university students. Underlying the study were three assumptions. First, meaningful changes in scores on personality inventories do occur; second, these changes are related to certain characteristics a student possesses when he enters college; and third, the changes are related somehow to a student's college experiences.

The data presented in this report are concerned with two aspects of changes in scores: (1) significance of changes in means, and (2) stability of factor structure over a four-year period. The data were analyzed with respect to the following questions: Were the observed changes in the mean scores statistically significant? Were observed changes of sufficient nature to alter the factor structure underlying the inventories?

Procedure

Method and Sample

In the fall of 1957, 287 entering freshmen at the University of California volunteered to participate in a four-year study of their "adjustment" to the University. Each sub-

¹Study was supported by a grant from the School of Education. Tests were scored through resources of the Center for the Study of Higher Education, University of California, Berkeley.

ject took an extensive battery of tests and completed a lengthy questionnaire designed to obtain information about his background experiences and about his future plans and aspirations. The tests were repeated during the spring semester of 1961. A total of 42 subjects were removed subsequently from the sample because they had been incorrectly classified as freshmen, or they refused to participate in follow-up phases of the study, or they left the University and did not reply to requests for follow-up information. Of the remaining 245 subjects, complete test data were available for 89—47 males and 42 females. These 89 subjects, then, constitute the sample on which this report is based.

Instruments

The inventories administered to the subjects included the Strong Vocational Interest Blank (SVIB), the Omnibus Personality Inventory (OPI) and the Allport-Vernon-Lindzey Study of Values (AVL).

Only the nonoccupational scales of the SVIB—Interest Maturity (IM), Occupational Level (OL), Masculinity-Femininity (MF) and Specialization Level (SL)—were analyzed in this study. The first three scales are well-known and will not be described. The SL Scale was developed by Holmen (Strong & Tucker, 1952) to differentiate between medical specialists and nonspecialists. Since medical interests were common to specialists and nonspecialists, Holmen contended that the medical factor was eliminated from the scale. What remains is a measure of willingness to narrow one's vocational activities as required of any specialists, regardless of field of endeavor. He presented some evidence in support of his contention.

The six subscales of the AVL are well-known and need not be described here.

The OPI was developed by the Center for the Study of Higher Education, University of California (Heist & Williams, 1957) for the study of college populations. The edition of the instrument utilized in this study was composed of 18 subscales taken from a number of other instruments and from the research literature. Seven of

the scales—Lie (L), Validity (F), Correction (K), Hysteria (HY), Psychopathic Deviate (PD), Schizophrenia (SC) and Hypomania (MA)—were borrowed directly from the MMPI. Brief descriptions of the other eleven scales, taken from the original manual, are presented below:

The *Social Introversion Scale* (SI) was developed by Drake (Drake & Thiele, 1948) using MMPI items. High scorers have relatively little interest in people; low scorers, a great deal.

The *Thinking Introversion Scale* (T), developed by Evans and McConnell (1941), was incorporated into the OPI without change except that the format of response was altered to accommodate true-false type of answers. High scorers tend to be interested in reflective thought of an abstract nature. Low scorers show a tendency for overt action; their thinking is dominated by objective considerations.

The *Responsibility Scale* (R) was originally developed by Cough, McClosky, and Meehl (1952) as a measure of responsibility along a continuum of social activity. High scorers tend to be seen as planful, resourceful and concerned with social and moral issues; low scorers, as immature, lazy and impulsive.

The *Complexity of Outlook Scale* (CO) (Barron, 1953) was developed to distinguish between persons reacting to the complexity of the environmental stimulus patterns and those reacting to patterns of greater simplicity. High scorers tend to be described as independent and creative; low scorers, as conservative, compliant and ready to accept authority and tradition.

The *Originality Scale* (O) was developed at the Institute of Personality and Research (Barron, 1955). High scorers are characterized as being independent in judgment, loving freedom of expression and having novelty of insight.

The *Authoritarian Scale* (FA) is the 45/40 form which was adapted from the original research on the authoritarian personality (Adorno *et al.*, 1950). High scorers tend to be associated with in-group orien-

tation and to be identified with power. Low scorers are relatively more flexible and democratic in their thinking.

The *Social Maturity Scale* (SM) is a 60-item form of a scale developed at Vassar by Webster *et al.* (1957). It was derived partially from the FA scale but scored in the opposite direction. High scorers tend to be more culturally sophisticated and more self-confident than do those with low scores.

The *Impulse Expression Scale* (IE) is a 60-item form of a scale developed at Vassar (Sanford *et al.*, 1956) under the title of the "J Scale." High scorers tend to be impatient and impulsive; low scorers, reserved and dignified.

The *Development Status Scale* (DS) is an adaptation, a somewhat longer version, of a scale also developed at Vassar. It was devised to measure differences between freshmen and seniors. College seniors are characterized as being more flexible and tolerant of ambiguity and more tolerant of others than are freshmen.

The *Dominance and Confidence Scale* (DC) is a 52-item version of still another scale developed at Vassar (Webster *et al.*, 1957). High scorers tend to see themselves as leaders within groups and in various social situations.

The *Ego Strength Scale* (ES) is a 31-item form of a scale developed originally by Barron (1953) to predict the responses of psychoneurotic patients to psychotherapy. High scorers tend to be characterized by terms such as alert, adventurous, resourceful and responsible. Low scorers tend to be dependent, affected, mild and mannerly.

These instruments were included in the study because they appear to measure variables or characteristics which should be highly related to a student's success or adjustment in college. At the same time, the scales measure variables which should be subject to extensive modification through college experiences. A possible exception to the latter point would be the Strong scales, which have been found to be remarkably stable for college-age subjects.

Analyses of Data

The significance of changes in mean vectors for males and females was determined by means of Hotelling's T^2 for one sample composed of differences between pre- and postscores. Similarity of factor structure over the four years was determined by means of canonical correlation.

Findings

The findings have been organized and discussed according to the two questions posed in the introduction.

Table 1

Means and Test-Retest Correlations Over 4-Year Period (N = 89)

Variable	Means		Test-Retest Correlation
	Freshmen	4 Years Later	Over 4 Years
OPI			
L	4.01	3.99	.40
F	1.54	1.2	.17
K	14.98	16.06	.56
IHY	21.75	22.17	.39
PD	21.88	21.60	.29
SC	27.61	26.84	.37
MA	21.09	19.79	.51
SI	26.15	25.13	.65
T	38.74	41.97	.54
R	38.88	40.28	.56
CO	13.99	16.29	.41
O	24.29	25.16	.53
FA	8.72	6.15	.58
SM	33.85	30.66	.50
IE	22.70	20.89	.55
DS	22.02	24.52	.54
DC	31.60	33.58	.59
ES	22.16	23.46	.23
AVL			
T	44.72	45.26	.71
E	37.36	36.49	.57
A	38.75	42.89	.73
S	37.21	37.40	.54
P	40.74	41.82	.67
R	40.99	36.01	.64
SVIB			
IM	50.66	55.61	.65
OL	56.07	53.01	.35
MF	40.63	38.75	.87
SL	42.12	49.33	.42

Were the Observed Changes in Means over the Four-Year Period Statistically Significant?

As shown in Table 1, the relatively low test-retest correlations for a number of the

scales indicate a lack of stability and, hence, considerable variation in scores. Undoubtedly, the relatively low test-retest correlations can be explained partly in terms of low scale reliability. Yet inspection of the differences in means indicates that the apparent changes are similar to those that might be expected on the basis of previous research and/or that one might wish for as an outcome of a college education. It is noted, for example, that students tended to show a decrease in authoritarianism and an increase in developmental status and reflective thinking.

Probably the traditional *t* tests for differences between correlated means would indicate that the changes in means over the four-year period would be statistically significant. However, analyses of specific changes in mean scores without regard for change in the total profile of mean scores may be misleading. Harris (1962) has described a number of problems in analyzing such profiles by univariate procedures. Ryan (1959) has shown that the experimental error rates increase with the number of comparisons to be made among experimental variables. Consider, also, the nature of the multivariate instruments used in this study. On the ipsative scales of the AVL, changes in scores on one scale must be reflected in changes on other scales. Because

of item overlap on the scales of the OPI and of the SVIB, correlations between scores on various scales and changes in mean scores on these scales of each inventory would be spuriously correlated.

In that Hotelling's T^2 provides an overall measure of significance of changes in mean vectors, it is the most appropriate available technique for determining significance of changes in mean scores on multivariate instruments such as those used in this study. T^2 s were computed for each inventory. The data were analyzed separately for each sex. Because of the ipsative nature of the AVL scores, i.e. the sum of the six scores must total 240, the Social Scale was arbitrarily eliminated from the analysis. Otherwise the AVL scores would have yielded a singular matrix for which there is no T^2 solution.

The findings are shown in Table 2. Over the four years, changes in mean vectors were significant well beyond the .01 level for all three inventories.

Scales contributing to the significant T^2 s are shown in Table 3. For females, changes in means significant at the .05 level were noted for 17 of the 27 scales; for men, 11 out of 27. According to the description of the OPI scales, over the four years women tended to become more interested in people, more interested in reflective thought

Table 2
Hotelling T^2 for One Sample Based on Differences
Between Pre- and Post-Scores

		Observed T^2	df	Critical T^2 * at .01 Level	Decision
Females	AVL	34.368	5	19.72	Significant
Males	AVL	26.493	5	19.11	Significant
Females	OPI	438.667	18	85.79	Significant
Males	OPI	206.872	18	75.23	Significant
Females	SVIB	63.458	4	16.62	Significant
Males	SVIB	36.025	4	16.20	Significant

*Critical $T^2 = \frac{(n-1)k}{n-k} F$ where *F* has *k* and *n-k* degrees of freedom.

Table 3
Significance of Difference in Changes in Mean Over a
Four Year Period (From T^2 Analysis)

		Females (N = 42)				Males (N = 47)			
		$\bar{X}_1 - \bar{X}_2$	Lower* Limit	Upper* Limit	Decision at .05 level	$\bar{X}_1 - \bar{X}_2$	Lower* Limit	Upper* Limit	Decision at .05 level
OPI	L	.715	.073	1.357	Significant	-.596	-1.210	.018	—
	F	.190	-.167	.547	—	.468	-.031	.967	—
	K	-.547	-1.660	.566	—	-1.554	-2.995	-.113	Significant
	HY	.429	-.991	1.849	—	-1.170	-2.362	.022	—
	PD	.619	-.740	1.978	—	-.021	-1.888	1.046	—
	SC	2.071	.300	3.842	Significant	-.404	-1.904	1.096	—
	MA	1.595	.172	3.018	Significant	1.043	-.136	2.222	—
	SI	2.596	.353	4.819	Significant	-.404	-3.219	2.411	—
	T	-4.333	-7.107	-1.559	Significant	-2.234	-4.863	.395	—
	R	-.762	-2.074	.550	—	-1.978	-3.274	-.682	Significant
	CO	-3.452	-4.801	-2.103	Significant	-1.276	-2.375	-.177	Significant
	O	-1.572	-2.856	-.290	Significant	-.170	-1.313	.973	—
	FA	3.095	1.977	4.213	Significant	2.106	.835	3.377	Significant
	SM	2.619	.873	4.365	Significant	3.702	1.784	5.620	Significant
	IE	1.047	-1.347	3.441	—	2.489	.089	4.889	Significant
	DS	-4.072	-6.078	-2.066	Significant	-1.085	-2.789	.618	—
	DC	-4.690	-6.970	-2.410	Significant	.426	-1.994	2.846	—
	ES	-2.452	-3.462	-1.442	Significant	-.277	-1.239	.685	—
AVL	T	-1.977	-4.795	.841	—	.638	-1.776	3.052	—
	E	-.191	-2.822	2.440	—	2.000	-.682	4.682	—
	A	-4.381	-7.627	-1.135	Significant	-3.809	-6.703	-.915	Significant
	P	-1.643	-4.385	1.099	—	-.745	-3.076	1.586	—
	R	6.500	2.571	10.429	Significant	3.596	.588	6.604	Significant
SVIB	IM	-5.547	-7.508	-3.586	Significant	-4.277	-6.637	-1.917	Significant
	OL	4.048	1.923	6.173	Significant	2.170	.378	3.962	Significant
	MF	.429	-2.251	3.109	—	3.170	.210	6.130	Significant
	SL	-11.048	-16.984	-5.112	Significant	-3.766	-9.528	1.996	—

*Confidence interval is determined by the formula $(\bar{X}_1 - \bar{X}_2) \pm \sqrt{F_{n,d}} \frac{1}{\sqrt{N_1}} \sqrt{S_1^2 + S_2^2}$

The hypothesis tested is that the difference between means is zero. If the interval between the upper and lower limits includes zero, then the difference is considered to be insignificant.

of an abstract nature, more independent, more flexible, and more adventurous and to see themselves more as leaders. The males tended to become more concerned with social and moral issues, more independent and somewhat more impulsive or impatient. Both males and females became somewhat less authoritarian, as measured by the FA Scale. A somewhat puzzling trend is the decrease for both sexes in mean SM scores, the SM Scale being inversely related to the FA Scale.

As indicated by changes in mean scores on various scales of the AVL, both men

and women tended to become more oriented toward the aesthetic aspects of their environment and less toward the quest of the meaning of life, as measured by the Religious Scale.

On the SVIB, both males and females showed an increase in mean scores on the IM Scale, and a decrease in OL scores. Interests of the males became somewhat less masculine. As indicated by the increase in mean SL scores, the interests of women became significantly more like those of males who have entered some field of specialization.

*Was the Factor Structure Underlying the Scales Altered Over the Four-Year Span?*²

Bereiter (1962) has raised the question as to whether changes in students' scores which result in low test-retest stability may not reflect changes in the factor structure of the instruments. Certainly, from the large number of low test-retest correlations in Table 1, such changes in structure could be possible. Also, although inspection of the pretest and posttest intercorrelation matrices indicated that, in general, correlations among scales that were high as freshmen were still high and in the same direction four years later, there appeared to be some changes in the magnitudes of the intercorrelations. Were these changes, then, of sufficient magnitude to alter appreciably the factor structure underlying the instruments?

As indicated earlier, similarity of factor structure was determined by means of canonical correlation. Canonical correlation, described in Anderson (1958), produces a maximum correlation between linear composites of two sets of multivariate scores—with the data in this study, one set of multivariate scores administered at two different times. This analysis provides the first canonical correlation. Then a second set of linear combinations is located, independent of the first linear composites, so as to yield the next highest correlation. The process is continued until correlation of additional linear combinations ceases to yield significant information about the relationships between the two sets of variables. A high canonical correlation indicates similarity of factor structure for pre- and posttests. As in the T^2 analysis, and for the same reason, the Social Scale was eliminated arbitrarily from the analysis of the AVL scores.

The first canonical for the AVL was .76; for the SVIB, .89; and for the OPI, .90. Thus the factor structure for these three inventories was quite stable over the four-year span.

If the canonical correlations are high, factor loadings of the component scales on the canonical variates can be obtained by

premultiplying the intercorrelation matrix (R_{AA}) for the predictor variables (pretests) and the matrix (R_{BB}) for the criterion variables (posttests) by the transpose of their respective weight matrices (A' and B') obtained from the canonical analyses. When the canonical correlations are smaller, a more appropriate procedure would be to pre-multiply the correlations matrix for the pretests (R_{AA}) by the transpose of its weight matrix (A') and the matrix of intercorrelations between pre- and posttests (R_{AB}) by the same weights.² The latter procedure was used with the data reported in this study. The above multiplications can be represented as follows: $A'R_{AA}$ and $A'R_{AB}$.

The obtained factor loadings can be plotted in the same manner as typical factor loadings. Since the two sets of loadings are in the same space they can be superimposed on the same plot. Differences in any two points for a single scale represent the amount of shift in factor structure for that scale over the four-year period, at least for the canonical variates being plotted.

Plots of the first two canonical correlations for each of the three inventories are shown in Figures 1, 2 and 3, respectively. Note that the loadings for each of the scales are quite similar over the time interval.

Conclusions

With reference to the two questions posed at the beginning of this report, the following conclusions appear to be justified. First, over the four-year span, appropriate multivariate analysis indicated that there were highly significant changes in mean scores over-all on these three multivariate instruments. For the most part, the changes in mean scores on specific scales of each inventory are in the direction that might be expected, if a college education has an impact on the types of variables assessed by

²The mathematical basis for these procedures has been derived by Walter R. Stellwagen of Michigan State University. His work is being prepared for publication.

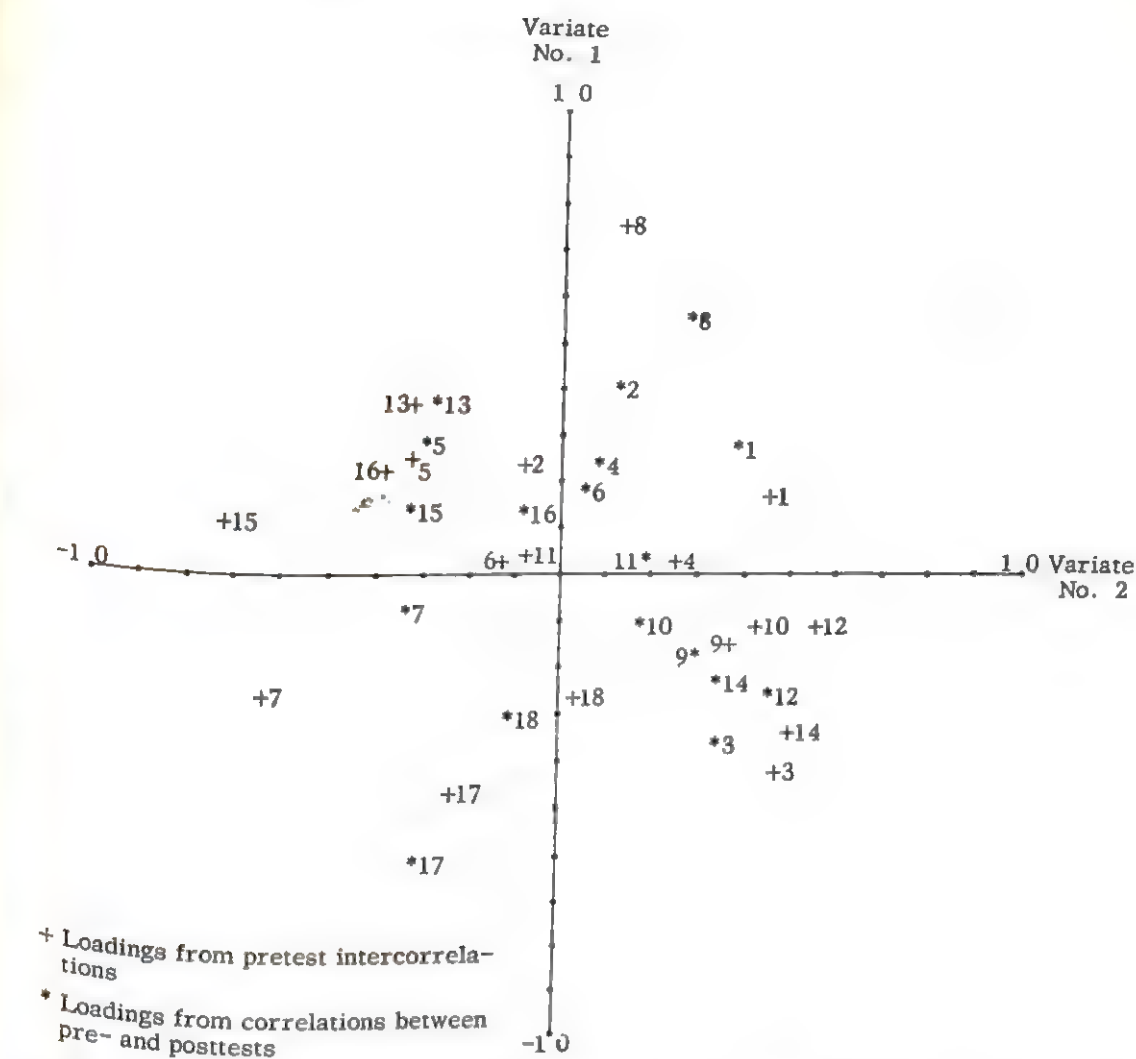


Fig. 1. Plot of factor loadings for first two canonical variates on the OPI. Numbers refer to following OPI scales:

1—L	4—Hy	7—MA	10—R	13—Fa	16—DS
2—F	5—PD	8—SI	11—CO	14—SM	17—DC
3—K	6—SC	9—T	12—O	15—IE	18—ES

these instruments. Second, despite the changes in mean scores and in test-retest correlations, the factor structure underlying each of the instruments remained quite stable over the four-year span.

Caution should be exercised in generalizing from the findings of this study. Admittedly, the sample was small and was a fairly homogeneous group of academically able university students. However, the findings would indicate that, on these tests and with subjects similar to those used in

this study, it is possible to study changes in scores without being concerned that the underlying meaning of the scales will change markedly at the same time.

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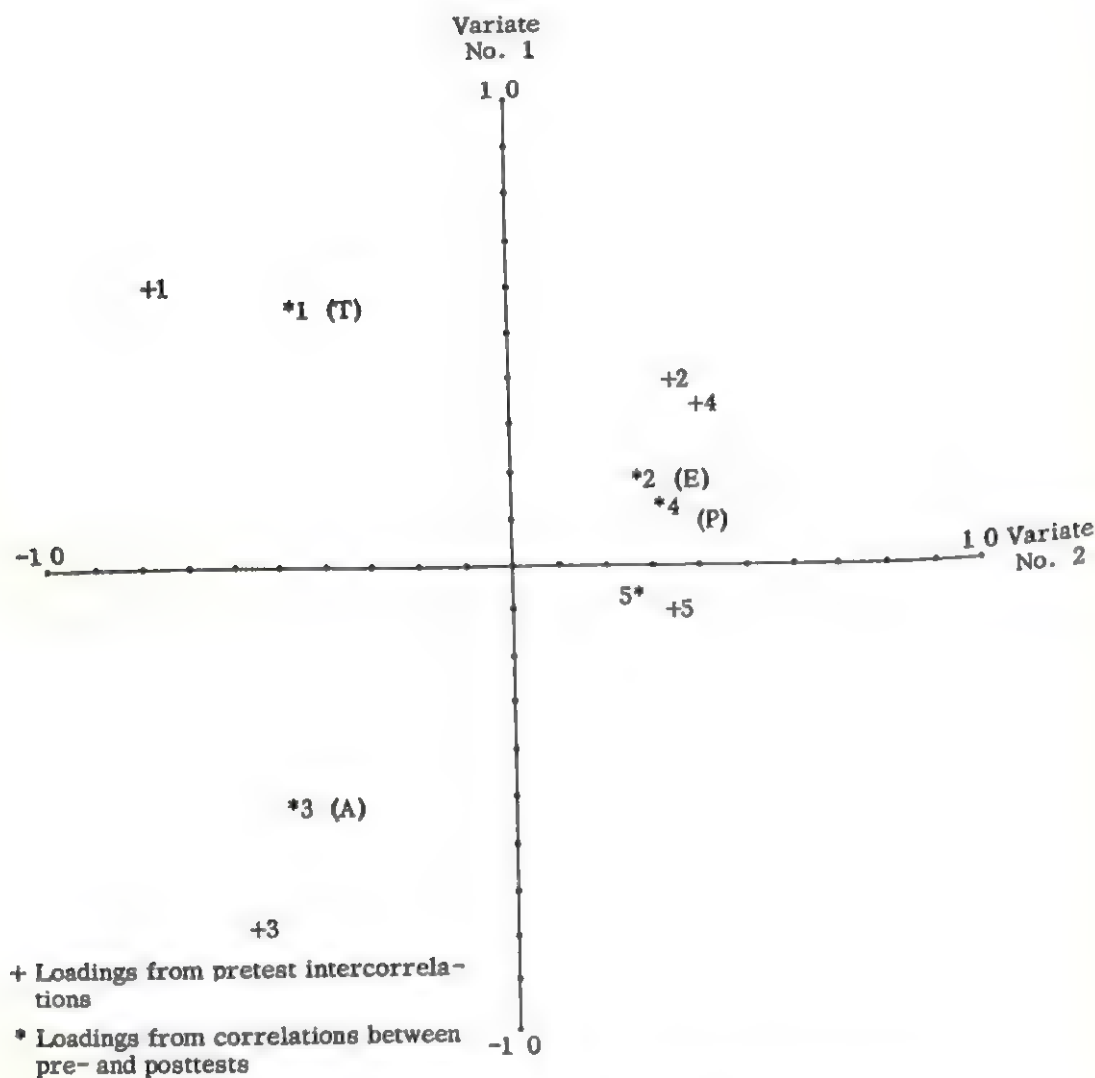


Fig. 2. Plot of factor loading for first two canonical variates on AVL.

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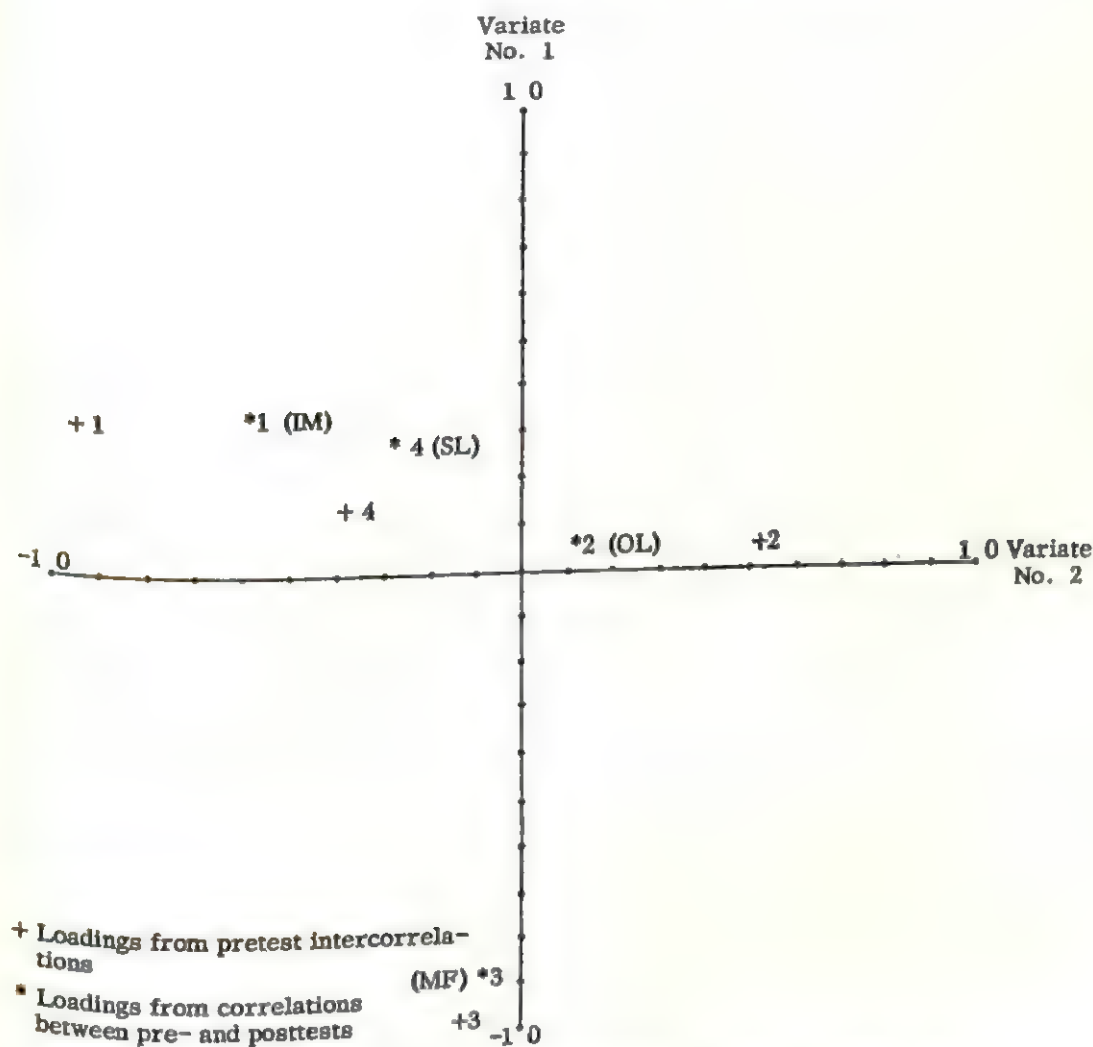


Fig. 3. Plot of factor loading for first canonical variates on the SVIB.

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Comment

The seeming intractability of values in personality to education in college has concerned me since Jacob's treatise on the subject despite the modifications in my pessimism which are warranted by the later review of Webster. I have therefore

looked upon this work of Stewart with interest because it offers needed hope that values in personality are modified through work in college. Stewart's success where many have failed causes me to speculate in particular about his technique.

Values may change in college in two regards as Stewart notes. On the one hand the centers of the groups may occupy different places in the space spanned by the variables of value on two different assessments of those values. On the other hand, the centers may remain fixed upon reassessment but individuals may shift their positions. Therefore it is necessary to test both such possibilities as Stewart so perceptively did. Interaction between these two main effects may also exist, of course. A test of such interaction does not appear to be available at the present time.

Significance tests of the differences among the means of several groups of subjects in terms of multiple measurements (e.g., Hotelling's T^2 test which Stewart applied) are now becoming a more established part of procedure in psychological research as they should. Therefore, I will not comment further on this aspect of Stewart's work.

The intriguing aspect of Stewart's technique is that he turns the procedure of canonical correlation analysis into a means for study of the modification of individual variability in values which is associated with a college education. Although the mathematical development of his procedure is not available to me at the moment, intuitively the procedure seems sound. Perhaps I can further sensitize your intuitions on this problem.

When two sets of measurements are available for each person in a group, the canonical correlation coefficient indicates the relationship between a linear composite of each of the sets of measurements. Pairs of such composites, i.e., the canonical variates, are available for each of the relative maxima of the characteristic equation of the canonical variation between the two sets of original measurements. Theoretically the pairs of canonical variates can be as numerous as the number of variables in the smaller of the two sets of original variables. (The multiple correlation coefficient is a special case of canonical variation in which one of the sets of variables contains only a single variable.)

Stewart's achievement is to convert the canonical vectors in his canonical analysis of the relationship between value assessments made in the early and late periods of college attendance into factor vectors, a possibility of which I was formerly unaware. The conversion of a canonical vector into a factor vector seems to be accomplished by the premultiplication of each of two panels of correlations among the original variables by an appropriate canonical vector. In this case the panels of correlations used were (1) the intercorrelations of the scores in the early period of college, and (2) the correlations of those same scores with their counterparts in the later period of college. These latter correlations are influenced both by the unreliability of the tests in use and the modifications which accompany college attendance. In Stewart's case, converted factor vectors were similar in terms of both the matrix of correlations of *original* scores and of the matrix of correlations of the *early and late administrations* of the tests, a fact indicating that the factor structure of the tests was not modified because of the events of a college education.

Without recourse to the mathematical development, I do not know which types of factors are obtained by Stewart's procedure. Such concern is not relevant in his study, however, because the empiric indication is that the converted vectors are so similar in each instance under test. It would appear, as Stewart notes, that his scores were influenced in their aggregate during college attendance and that this influence acted fairly uniformly among the individuals.

Stewart offers a new path into the study of changes in value in personality which accompany education. I suspect that we would do well to think more about his procedures and to bring them to bear more frequently upon problems of this type.

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Counseling and the Ages of Man¹

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Counseling in the 1960's draws upon four areas of psychological knowledge: (1) characteristics of mental health, (2) nature of human development, (3) functioning of the self-concept, (4) nature of decision making. The counselor helps the client achieve maturity, productivity and satisfaction and to play effective and satisfying family, work and community roles. To do this the counselor must understand the developmental significance of behavioral patterns and must be able to help the client not only to make appropriate decisions and plans but also to develop problem solving facility and independence. Applications of these counseling principles are made to vocational counseling at the five stages of vocational development.

This is a personal document. In it, I will attempt to pull together what appear to me to be the current substantive bases of counseling in the 1960's and to point out their implications for counseling at successive stages of vocational development.

Substantive Bases of Counseling

It seems to me that there are four large areas of psychological knowledge which are drawn upon most heavily by counselors, whether they are aware of it or not, namely: (1) the characteristics of mental health, (2) the nature of human development, (3) the functioning of the self-concept and (4) the nature of decision-making.

First: counseling and mental health. It is axiomatic that the goal of the client (and of the counselor in working with the client) is the attainment and maintenance of mental health. One of the variables which early distinguished the counseling psychologist from other clinically oriented psychologists was emphasis upon the client's assets and his progress towards some life goal; this in contrast to the diagnosis of pathology and the treatment of mental difficulties.

¹Presidential Address, Division of Counseling Psychology, Annual Meeting of American Psychological Association, Philadelphia, Pennsylvania, August 30, 1963.

Several weeks ago, at a seminar for counseling psychologists and trainees at a Veterans Administration Hospital, I asked each person what he thought would be the distinguishing characteristics of a mentally healthy thirty-year old man. Following are some of the criteria mentioned:

1. satisfaction from daily living
2. appropriate career progress
3. basic confidence in the future, both for himself and for the world in general
4. some form of stable interpersonal relationship
5. belief in some set of principles giving meaning to his existence
6. ability to assert feelings appropriate to the situation
7. awareness of assets and liabilities
8. a sense of direction, i.e., goals reasonably defined, both occupational and personal
9. the taking of instrumental behavior leading toward his goals
10. ability to deal constructively with life situation anxieties

In summary, this hypothetical 30-year old mentally healthy male could be characterized as a *mature* person living a life which is *socially productive* and yielding *personal satisfaction*. Or one could say that the mentally healthy young adult has sufficient understanding of himself and his environment to play an effective and satisfying role in his family, in his work and in his community.

Second: counseling and developmental psychology. As mentioned above, a characteristic of mental health is maturity. Maturity, of course, is a relative term; we can say that a ten year old is "mature for his age." The counseling psychologist therefore needs to be an expert on human development. He needs to know what kinds of behaviors are appropriate in terms of a person's age, background experiences and environmental demands. He needs to know what kinds of experiences both within and outside the counseling room will facilitate movement toward the goals appropriate for that person. He needs to know whether it is better to reduce the gap between what is demanded of a given individual and what that individual is able to perform by (1) raising the level of performance or by (2) lowering the level of demands. He needs to know whether attitudes and behaviors exhibited by the individual are "normal" for that person's developmental stage or whether they represent a kind of retardation and, if so, whether the retardation is symptomatic of the maximum potential of the individual or whether it is a temporary condition which can be compensated for.

As one looks back over the history of the provision of counseling services, it is apparent that the typical counselor knows most about and has had most experience in working with the teen-age and young-adult groups, an outcome of the fact that counseling services have most frequently been located in educational settings. This is understandable and even desirable, since these groups are in the growth period when adult patterns of behavior are being established and when the individual is still relatively malleable. However, the post-World War II expansion of counseling services has been in both directions, i.e., both down into the earlier ages, namely junior high and elementary grades, and upward into middle age and the older age groups. It is rather anomalous that we have more basic information about the developmental problems of the teen-ager and of the 60-70 year old faced with adjustment to old age than we have of the 30-50 year

old, yet this latter age group is in the period of maximum contribution to society. In addition, this 30-50 year old period is the one in which there is the maximum interaction among the three basic areas of life and when family, work and community responsibilities are all of major importance and are in a sense competing for the psychological energies of the individual.

Third: counseling and the self. Much of the psychological literature since World War II has been organized around the term "self." We read of the developing self-concept, of self-understanding, of self-actualization, of self-acceptance, of self-rejection, of self-fulfillment, of self-identity. Man is obviously more than a mere collection of independent responses to isolated stimuli. There is in man a unity, a patterning of behavior resulting from a hierarchy of needs which grows out of some basic value system and motivates the individual's behavior at various levels of conscious awareness.

Although one of the major goals of counseling is to help the individual arrive at a better understanding of himself, his goals, his needs and the drives which underlie his behaviors, there are various levels of understanding, and I for one do not believe that one necessarily needs to understand fully the primary causes of one's behavior. In career planning, for example, it may be enough for a given client to know that his interest in people is an intellectual interest in human behavior and in the ultimate betterment of society rather than a desire to work intensively and directly with individuals in terms of their particular needs. It seems to me that the level of understanding of the *why* of an individual's behavior depends upon the need to *change* that behavior. This may be the most important single difference between counseling and psychotherapy, i.e., that in therapy the explicit goal is the changing of ineffective attitudes and behaviors while in counseling a more frequent objective is the maximum utilization of the current repertoire of behaviors or the acquisition of new or additional behaviors.

Fourth: counseling and decision-making.

If there is one thing that is obvious about life in the United States in the 1960's it is that the decisions faced by individuals in their daily lives are becoming more complex and difficult. We live in an age and in a social system which makes maximum demands on our decision-making and planning abilities. Our democratic society is based on the principle that each individual has the right to choose. We choose our spouses, our schools, our occupations, our place of employment, where we are to live, our political leaders. The whole rationale of our society is that maximum freedom and opportunity for individual development will result in both individual and social good so long as there is reciprocal interaction between societal demands and individual choice.

Study of the decision-making or choice process has revealed that the validity of a choice is a function of (a) the adequacy and accuracy of the information available, (b) an understanding of the type of decision appropriate to the situation and (c) the elimination or reduction of the influence of the irrationalities which interfere with wise decisions.

In the vocational planning area, particularly for the young person, it is becoming increasingly difficult for the individual to get a useful picture of what life in a given occupation involves. Here is a real dilemma. On the one hand, we ask young people to make a "decision" with respect to the occupation they would like to prepare for and eventually enter, and, on the other hand, we recognize that the occupational world is rapidly changing and that much of the work of the modern world is literally unobservable or unexperienceable by young people.

When I was a youngster in a coal-mining town in Pennsylvania, I could stop on my way home from school and watch the blacksmith working in his shop. I could ride on the caboose of a freight train with a friend whose father worked on the railroad. I went 1400 feet underground to see coal being dug and transported to the surface and I

went ten stories up a colliery and watched the coal being processed and graded as it worked its way down from floor to floor until it was loaded onto railroad cars at ground level. Except for the job activities of the local bootlegger, I had a fairly intimate acquaintance with the life and duties of the major occupations in my home town. In contrast, many young people today hardly know what even their own fathers do for a living. They may know not much more than that he works for a certain company and that he leaves on the train or a bus in the morning and returns home in the evening.

To be useful in decision-making, information must be interpretable and meaningful. What we need in vocational planning is a description of occupational activities in terms close to the experience of the person needing the information. What, for example, can a junior high school student do with the following job description? "Sets up or operates a multiple-spindle drill press which simultaneously or in sequence drills, reams, counterbores, countersinks, or spot-faces a number of holes or depressions in metal." I am glad to report that, as chairman of the Personnel & Guidance Advisory Committee of the Bureau of Labor Statistics, I have been quite pleased to observe (over the last few years) the concern which those responsible for the Occupational Outlook Handbook have for the provision of occupational information designed for and helpful to the lower age levels.

Another need of the client is to get a clearer picture of what level of specificity of decision is appropriate for the circumstances. Goals are necessary for motivated behavior but they can also be restrictive. Human decisions in most life situations involve more than a mere matching of two static sets of data. Instead, we have a changing individual and a changing environment and the real decision is how to plan for change.

This observation leads us to the point that counselors must realize that most human decisions are not completely rational. Some individuals do not have the tolerance

for ambiguity which permits them to make a decision which leaves the situation open and fluid. They have a need for structure, for certainty, for specificity, for closure. Herein lies an important challenge for the counselor in that he must understand the client well enough to know whether the client's mode of handling a problem situation represents a fundamental characteristic of the individual's personality or whether it is being determined by some relatively transitory or changeable factor.

One of the most difficult diagnoses faced by the counselor is the direction of the cause-and-effect relationship between behavior and attitude which is operating in the client with whom he is working. Can he assume that the appropriate behavior will automatically follow if the client is helped to change his attitude? Or should he follow the strategy that the introduction of new behaviors into the individual's repertoire will result in a change of attitude. Conceptually one can dismiss this question in somewhat the same manner that most of us dismiss the heredity-environment question and glibly say it is both and there is mutual interaction. But in an individual case, the counselor has to make a decision as to his counseling strategy. On the one hand, he may set up an intensive counseling relationship within which the client explores in depth his attitudes and their probable genesis. Or on the other hand, he may help the client set up a plan of action designed to develop more effective ways of handling a difficult situation so as to reduce the crippling anxieties which in the past have interfered with success.

Facilitating Client Growth

One danger in discussing counseling in terms of decision-making or problem-solving is the tendency to infer that the primary goal of counseling is therefore the making of the decision or the solving of the problem and that once the decision is reached or the problem solved counseling is over. Also that if the outcome has been successful, the counseling process has *ipso facto* been effective. To conceive of the counselor as a "problem-solver" or "ad-

vice-giver" or "decision-maker" represents a serious neglect of the significant role of the counselor in facilitating the self-development of the individual. In helping a client with a problem or with a decision, the counselor's role is not to provide the answer but to help the client to analyze the problem, to formulate the critical questions, to obtain the relevant information and to draw wise conclusions. What the counselor contributes is his wisdom with respect to the problem-solving process, not his wisdom with respect to the solution. In fact, it is quite likely, as Rogers believes, that the client is really a better judge of what is good for him than is the counselor, even with the latter's wider experience and presumably greater wisdom. The counselor must therefore structure the helping process in such a way that it becomes a learning experience for the client and so that the client grows in the process.

This double goal of combining the resolution of the immediate problem with the development of a general problem-solving facility on the part of the client represents a real challenge. Again we can say that most clients have the potential within themselves to solve their own problems but are unable to mobilize their capacities because something in the situation or in themselves prevents appropriate solutions from ever being considered. I remember the case of a young boy who was quite sure he wished to become an airplane pilot and who overtly demonstrated his intense interest in aviation by spending nearly every afternoon after school hanging around an airport and even drawing pictures of the various airplanes. Counseling helped him to realize, however, that what he really liked to do was to draw and that the interest in airplanes was somewhat incidental to his basic interest in artistic activities *per se*.

Another function of the counselor is to help the client not only to plan and carry out but also to interpret the significance of exploratory or try-out experiences. As Herzberg and his colleagues (1959) have demonstrated, job satisfaction is a function

of two kinds of variables, viz., those which lead toward positive satisfaction and those which lead toward feelings of dissatisfaction. If the satisfiers are not present, the individual may still not necessarily have a strong negative attitude toward his job. Or likewise, if the dissatisfiers are not present, the individual still will not necessarily have a strong positive attitude toward his job. Those familiar with this study may recall the interesting fact that the satisfiers tend to be concerned with the nature of the job, its duties and its demands on the individual's capacities while the dissatisfiers tend to be concerned with the conditions of work, such as physical environment, equipment, supervision, financial rewards, etc. The relevance of this study to the point I am making is that the counselor needs to help the client identify whether his overall attitude toward an occupation is an outcome of experience with the tasks themselves or merely with the situational factors surrounding the tasks.

Another common danger in counseling is the tendency to assume that once the client has "made up his mind" the counseling job is done. Decisions require action if they are to be more than intellectual exercises. Counselors are all too familiar with the client who responds quickly and intelligently to the analysis of himself and the situation and who understands, even at a fairly deep level, why he is as he is and why he behaves as he does and yet cannot seem to do anything except talk about it in the counseling room. As Tyler (1953) has pointed out, there is a difference between "indecision" and "indecisiveness." Indecision is a state of mind and in its simplest form means merely that the individual is undecided as to what to do in a particular situation. Indecisiveness, however, is a characteristic of the individual which may be pervasive and difficult to change. The counselor therefore needs to explore the reasons why the client cannot or has not made up his mind. Is it because of uncertainty about information, or is it a case of choice anxiety with fear of the consequences, or is it symptomatic of a gener-

alized immaturity and reluctance to engage in independent, self-responsible behavior? What the counselor does in such a situation will differ considerably depending upon his diagnosis of the basic cause or causes for the "indecisiveness."

Counseling at Life Stages

In the final section of this paper, I plan to select one of the primary life activities and point out the relevance for counseling of our increasing knowledge of the nature of mental health, the decision-making process, the clarification of the self-concept, and the facilitation of the developmental process. I plan to do this with respect to vocational development, since it is in this area that I feel most competent. It is also an area in which *developmental stages* are rather apparent, in which decisions are required at choice points, in which work roles provide outlets for the expression of self-concept and in which mental health is facilitated through job satisfaction.

Super (1957) has formulated five Vocational Life Stages, based on earlier studies by Buehler, Miller and Form, and Ginzberg and his associates. They can briefly be described as follows:

The Growth Stage, representing the early years of physical and mental growth, during which hereditary and environmental factors interact to lay down general trends of development.

The Exploratory Stage, representing the 13-21 year old period, during which the individual progresses through fantasy, tentative, and increasingly realistic phases of career choices as his interests, aptitudes, temperament traits and value structure develop.

The Establishment Stage, the early adult period, during which the individual through trial experiences in beginning jobs and through response to social and economic influences, becomes established in a field of occupational endeavor. He reaches the stage when he begins to identify himself with a job or occupation.

The Maintenance Stage, the middle and later-adult period, during which the individual carries out, with varying degrees of success and satisfaction, his occupational career, and integrates his work into his total way of life.

The Decline Stage, i.e., the final period of life, characterized by declining abilities, transition from work to retirement, and adjustment to the changing demands and changing opportunities for self-expression.

These stages, of course, are abstractions and merely provide a set of expectations against which to relate and to interpret any given individual's career pattern. With increasing knowledge, however, of the patterns characteristic of subgroups differing in intelligence levels, sex, social class, geographical area and occupational field, counselors should be better able to understand a given client's stage of development and the types of problems being faced and to help the client anticipate and prepare for future developments. Studies such as Super's Career Pattern Study or Flanagan's Project Talent (1962) are in the process of providing such data.

Let us see what a counselor concerned with the vocational development of individuals will likely become involved with in working with clients during the various stages described above.

Growth Stage

In the past, the counseling psychologist, as such, only infrequently was called upon to work with clients in this age group, i.e., below age 11 or 12. Parents, teachers, school psychologists, social workers and child guidance workers were (and still are) the ones usually called upon to help the young child develop physically, socially and intellectually.

However, recent studies have shown that vocational interest patterns develop early in life and those concerned with this growth stage need to be aware of the vocational implications of early experiences. Even young people themselves can understand the relative ease and satisfaction they experience when engaging in activities involving things, words and numbers or people, i.e., the three broad categories of activity which make up our occupational structure.

Of more importance than patterns of occupational interest, however, is the development of attitudes toward work, toward leadership-followership roles, toward creative, self-expressive activities. The counseling psychologist, with his interest in normal development and in the maximum flowering of the individual's poten-

tial, has an increasingly recognized role to play in this stage.

Exploratory Stage

This is the age of man with which vocational counseling has been traditionally identified, as exemplified by the high school junior asking for help in "choosing an occupation." Before deciding on what kind of help to give, however, the counselor should determine, or at least set up some hypotheses concerning, why the individual needs or desires help. Using Pepinsky's (1948) formulation of Bordin's Diagnostic Categories, the counselor can ask himself, "Does this client come to me because he lacks information, or because he is basically a dependent person, or because he is troubled due to some conflict situation or because he is a victim of choice anxiety?" What the counselor does and what objective he has in his counseling should depend upon what the client needs most—whether reassurance, information, reality testing, emotional release or attitude clarification.

This is the stage when the maturing teen-ager is exploring not only the world about him but himself as well. He is actively seeking an identity, asking himself (not necessarily in a very explicit manner) "Who am I?" "Where am I going?" "What am I here for?" He may need help in engaging in try-out exploratory experiences which clarify rather than confuse his self-concept. He needs help in interpreting the significance, for later career progress, of his reactions to the variety of activities which make up the world of work. And above all, he needs help in making the type of educational and job decisions which will maximize the development and utilization of his career potential. The increasing emphasis within the Manpower Development and Training Act of 1962 on the re-orientation of jobless youth in our society is a striking demonstration of the need for counseling at this level.

Establishment Stage

Studies have shown that many young adults go through a "floundering period," i.e., a succession of jobs, before becoming

really identified with a particular occupation or employment setting. During this period, some individuals look upon each new job as a challenge or an opportunity to test themselves while others become confused and discouraged. The former tend to receive their "vocational counseling" informally through talks with parents, associates, bosses, wives, etc. The professional counselor is more likely to meet the latter type.

The primary problem of the individual during this establishment period is to develop a satisfactory and satisfying "way of life," in which work, home and social life become integrated and provide an adequate outlet for the individual's self-concept. In this period, the goal of implementing one's role in the world of work becomes crucial. Vocational, marital and social problems become intertwined and interacting and cannot be treated separately.

For example, a 35 year-old Army reservist came to our counseling center, uncertain as to whether to remain in the service, making it a life career, or whether to look for a civilian job at the end of his current term of enlistment. Ostensibly his problem was one of vocational choice but it soon became apparent that any occupational decision had to take into account his own self-concept, his attitude toward his wife, her attitude toward being an "army wife," his expectations for their children. The interaction of home life and work life was direct and immediate and the two were inextricably interwoven. Although the focus of counseling was on the career problem, the areas explored covered the total life situation of the client.

The vocational counselor, in working with individuals in this stage, cannot rely solely on the usual techniques. Aptitude and interest measures are of minimal value since the individual has already engaged in many of the activities the tests are designed to predict. The counselee frequently knows more about the *occupation or work setting than does the counselor* or than is available in *usual sources of occupational information*. Here the counselor can prof-

itably depend more upon a careful analysis of the life history of the individual in order to identify the recurring themes and developing career patterns. In the case of the Army captain, for example, it soon became apparent that his attitudes, decisions and actions were characterized by a need for a structured, ordered situation which would provide the security and the bolstering of ego which were so important to him. It was also apparent that he was repeating a pattern of self-defeating behavior which had characterized his earlier career behaviors.

Maintenance Stage

The client who seeks counseling help during the maintenance stage, i.e., the period after getting established in the work situation, is usually the one who is becoming dissatisfied with lack of progress or who continues to find it difficult to integrate his work with other phases of his life activities. In this stage the meaning of work itself to the individual is of crucial importance. Friedman and Havighurst (1954), for example, in a study involving different occupational groups found that workers of lower skill and socioeconomic status were more likely to see their work as having little meaning other than that of earning money, while the higher occupational groups tended to regard their work as being purposeful or of social value or as providing self-respect and prestige.

Counseling can help the individual to explore, in a relatively free and non-judgmental atmosphere, his basic attitudes toward work, and to come to a clearer realization of what he expects to get out of life. This, of course, is in addition to the more obvious questions which middle aged clients raise as to what further training to obtain in order to progress faster, what new fields are opening up, etc. Actually the client himself frequently has better information on these points than does the counselor and the reason for the client's felt need for help is usually found in inadequate personality tendencies such as dependence, insecurity, lack of self-confidence, self-conflict, etc. Counseling, although having a *vocational emphasis* and

although oriented around an expressed vocational problem, serves to improve the individual's self-understanding, to clarify his self-concept and to result in improved personality integration. How deep the exploration and how much of an attempt is made really to re-organize the individual's personality structure will depend upon the setting, the available time and the competence of the counselor as well as the readiness of the client.

The term "mid-career counseling" has recently arisen to designate counseling with the late 30 to late 40 year old who feels a need to look systematically at himself and his career progress. The need may result from several causes. An opportunity may have arisen for promotion to an executive level position, requiring a change from a professional or technical role to one of administration and bringing with it adjustment to a different mode of life and drawing on a different set of values. Or the slowing down of rate of advancement in the occupation may cause a vague dissatisfaction which raises doubts as to whether he really belongs in that type of work. Or the reaching of a career plateau sooner than expected or below the level of aspiration is threatening to the individual's self-concept. Or his technical skills have become obsolete, requiring either re-training or change in occupation.

Evidence of the need for counseling during this mid-career period comes from two sources: (1) executive counseling, which an increasing number of firms provide for their executives or supervising personnel through a staff or consulting psychologist or through developmental coaching by superiors as part of an employee development program and (2) the large scale employment counseling which the Department of Labor is providing as part of the re-training and re-employment programs under the 1962 Manpower Development and Training Act. Experience has already shown that return of technologically displaced workers to active employment requires more than a mere grafting on of new skills and that broad-scale counseling is necessary to improve the likelihood of real rehabilitation.

Decline Stage

Although some individuals maintain their careers and way of life to the end, for a large majority of the population, increasing age means a change in way of life due to retirement from their jobs, to breaking up of family associations, to enforced withdrawal from certain kinds of social activities. Motivation for continued work activity will depend, at least in part, upon the meaning work has had during the maintenance period. As Friedman and Havighurst found, those workers who regarded work primarily in terms of its financial meaning were more favorable toward retirement at age 65 than those whose work meanings were more psychological.

Vocational counseling with the older group, therefore, should concern itself with helping the individual to understand what work has meant to him, to develop substitute activities to take the place of work, and to adjust his life activities so as to result in satisfaction of his basic psychological needs. Here again the "thematic-extrapolation" approach described by Super (1957) is especially relevant.

In another case of an army officer (in this instance a colonel in the Regular Army), such an approach revealed that his Army career had been characterized by (1) administrative activities in a structured situation, (2) close identification with the goals of the organization, (3) regard for the underdog. Satisfactory post-retirement plans required finding a civilian work situation which would provide an outlet for these three needs. He found it by identifying a community need and eventually creating a position for himself, in a growing California town, in a public-relations, community-development capacity.

In a sense, the techniques used by the counselor with clients in this final stage are rather similar to those used in the exploratory stage. The client frequently needs information, in that he may be as ignorant of or as misinformed about retirement plans and possibilities as the young person is about entering occupational life. Again, crucial decisions at predictable moments of

time are necessary and plans for a sequence of actions can be worked through. Assuming that the older one gets, the more fixed are his basic attitudes and habit patterns, the problem is more one of finding a life situation compatible with the individual than of helping the individual adjust to a new situation.

Epilogue

So much for vocational counseling through the ages (that is, man's ages) and its dependence on the psychology of development, mental health, self-concept and decision-making. It would have been equally possible to discuss counseling in other life areas and with other groups. Females as well as males go through developmental stages, make decisions, seek outlets for their self-concepts. And the world of work is only one of the basic life areas in which humans search for success and satisfaction.

I would like to end this paper with a quotation from Bertrand Russell. In discussing the basic problem of happiness through work, he wrote:

Human beings differ profoundly in regard to the tendency to regard their lives as a whole. To some men it is natural to do so and essential to happiness to be able to do so with some satisfaction. To others, life is a series of detached incidents without directed movement and without unity. I think the former sort are more likely to achieve happiness than the latter, since they will gradually build up those circumstances from which they can derive contentment and self-respect whereas the others will be blown about by the winds of circumstances, now this way, now that, without ever arriving at any haven. The habit of viewing life as a whole is an essential part both of wisdom and of the true morality, and is one

of the things which ought to be encouraged in education. Consistent purpose is not enough to make life happy, but it is an almost indispensable condition of a happy life. And consistent purpose embodies itself mainly in work. (Russell, 1951, p. 126)

Counseling, at whatever the age of the client, or (I would predict) in whatever age of man, has a significant role to play in helping human beings to regard their lives as a whole and to develop that consistency of purpose which leads to personal success and life satisfaction.

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Group Participation Training for Psychiatric Patients¹

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This study used 49 psychiatric patients to compare two role-playing techniques for changing typical behavior patterns. Active and passive patients were assigned group discussion roles either similar to their usual behavior (role repetition) or opposite their usual behavior (role reversal). Following group discussions, patients filled out rating and reaction scales. The following statistically significant results were obtained: (a) During role repetition group discussions, patients exaggerate their typical behavior. (b) Passive patients have difficulty with role reversal, and active patients feel highly frustrated, yet role reversal is the more satisfying technique. (c) Passive patients can achieve high feelings of responsibility by asserting themselves only moderately. Discussion focuses on the advantages of role reversal, and the dynamics of passive patients.

Therapists who have worked with small groups stress the importance of a member's participating actively to derive substantial benefits (Beck, 1958; Corsini, 1957; Schwartz, 1959; Fleming, 1958). A recent study (Henderson, 1963) found that highly active participants in psychiatric human relations training laboratory groups derive more benefits than passive participants as measured by test changes on the MMPI. Miles (1960) similarly found that group involvement was significantly correlated with gain during a training laboratory involving a non-clinical population.

While participation appears related to beneficial change, it is an unfortunate fact that many psychiatric patients barely participate at all in the programs designed to help them. The problem of patient *passivity* and lack of involvement is a major one, particularly in group programs where the

passive patient can slide to the periphery of involvement and interaction. A problem, then, is how to enable or encourage such passive patients to learn to participate more actively in small group programs so that the benefits stemming from active participation will accrue to them.

Role playing has often been praised as a technique for stimulating learning and effecting behavior changes, although, as Mann (1956) has pointed out, there is a paucity of experimental evidence dealing with the actual effectiveness of different role-playing methods. The present study compares the usefulness of two role-playing methods for altering passive behavior patterns in psychiatric patients. For the sake of comparison, the effects of these techniques upon highly active behavior patterns in psychiatric patients are also investigated.

In one of the techniques studied, "role repetition," both passive and active patients are instructed to repeat their typical roles in group discussions. Afterwards, feedback and group discussion about typical be-

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havior are introduced in the hope of increasing self-awareness and understanding.

A second technique, called "role reversal," is also studied. Active and passive patients are instructed to reverse their usual and typical roles during group discussions. The discussion after role reversal focuses on difficulties in changing one's traditional behavior style. The present report deals with the question of which technique is more promising with passive patients.

Subjects

The following research data were collected from 49 psychiatric patients participating in the Seventh and Eighth Patients' Training Laboratories (PL 7 and PL 8), conducted in February and March 1962, at the Houston VA Hospital. The role-playing experiments described here were conducted as an integral part of the training program, which is designed to focus on critical aspects of interpersonal and group dynamics (Rothaus, Morton, Johnson, Cleveland, & Lyle, 1963).

Because role-reversal and role-repetition techniques were compared by using separate groups of patients from PL 7 and PL 8, it is important to point out that the PL 7 and PL 8 patients were well-matched groups. Table 1 compares the groups for age, education and diagnosis.

Table 1

Comparison of Age, Education and Diagnosis of Psychiatric Patients from PL 7 and PL 8 Trained Under Role-Reversal and Role-Repetition Techniques

	(PL 7) Role Reversal	(PL 8) Role Repetition
Number	26	23
Mean Age (years)	38.4	38.7
Range	24-56	26-49
Mean Education (years)	11.4	11.4
Range	5.0-16.0	5.0-16.0
Diagnostic Classification		
Schizophrenic Reaction ^a	6	5
Neurosis	9	8
Personality Disorder ^b	11	10

^aPsychotics in remission are accepted into the training program. Diagnostic classifications are those assigned shortly after the admission interview.

^bIn many cases in both PL 7 and PL 8, even though chronic alcoholism was not the primary diagnosis, problem drinking was an important factor in the person's social maladjustment.

The selection criteria for the two training programs were identical: at the time of admission into the program, the patient had to be nonpsychotic, literate, able to identify problem-areas in his interpersonal relationships, and willing to remain on the training laboratory ward for a period of four successive weeks.

Procedure

At the outset of both laboratories, participants were divided into three permanent groups of seven to ten individuals each. These groups were self-directed (no trainer or therapist was present during their meetings). As part of their four-week training, the groups met daily for discussions lasting an hour and a half. The groups were given no agenda and no specific topics to discuss for the first four such discussion sessions.

After each of the first four group meetings, every member rated himself and the other members on a nine-point *Participation Rating Scale* (PRS). The scale varies from one (did not talk at all) through nine (talked constantly). To identify the characteristically *active*, *passive*, and *moderate* talkers in the groups (for role assignment in this experiment), the average was computed of each individual's participation ratings during these first four meetings. Each group was then divided as nearly as possible into thirds, establishing three levels of participation based on each S's rank order within his group. (The mean PRS scores for Ss in PL 7 ($\bar{X} = 4.64$) and PL 8 ($\bar{X} = 4.81$) were compared by *t* test and did not differ significantly, another indication that the PL 7 and PL 8 Ss were well matched.)

Role Assignment

Prior to the fifth group meeting a topic was assigned for group discussion (What can we do here in our group to promote maximum learning?). In addition, members from each of three levels of group PRS scores (active, passive, and moderate talkers) were gathered separately and instructed in roles. Members at a given participation level were not aware that other roles

were being assigned to members at the other level.

The two experimental training procedures depended upon the roles assigned to active and passive group participants. Under *role repetition* (used in PL 8) members were assigned roles similar to those they ordinarily played in their groups. Active (high PRS) members were given a role as "gate-closers," that is, of monopolizing and closing the channels of communication in the group, with these instructions:

In your group discussion your role will be to talk as much as possible. Decide what you want to say on the topic now and push it in your group. Try to keep other members from talking. Talk them down and cut them off. In particular, try to keep the following men out of your group discussion (a list of those in the silent role followed). Do not let anyone know about your instructions until we get back into the general assembly.

Passive (low PRS) members were instructed to remain silent as follows:

In your group discussion, talk only when asked to by these people (a list of those in the "gate-opening" role, described below, followed). If they ask you to talk, feel free to talk. Try to avoid talking if asked to talk by these people (a list of those individuals assigned the "gateclosing" role above followed). Do not let anyone know about your instructions until we get back in the general assembly room.

Moderate (mid PRS) group members were given the function of "gateopeners" (i.e., opening up channels of group communication) with these instructions:

In your group discussion try to see that everyone gets a fair chance to talk. Try to help people who haven't had a fair chance to get into the discussion. In particular, try to see to it that these people have a chance to get into the discussion (a list of those assigned the "silent" role followed). Do not let anyone know about your instructions until we get back into the general assembly room.

Under the second method, *role reversal*, (used in PL 7) ordinarily passive members were given the task of "gateclosing"; active individuals in the middle range of participation again played the "gateopening" role. In other words, mid-range participants played the same roles in both training exercises. The terms role reversal and role repetition do not apply to them, but rather to

what is happening to active and passive participants.

The same instructions for gateopening, gateclosing, and the silent role were used in both role-playing procedures. From the role instructions, incidentally, one notes that gateclosing is a more active role than gateopening, since it calls for domination of group communication.

About ten minutes were required to present and explain the roles to Ss, who then went to their groups. After the role-playing discussions, participants filled out separate nine-point scales, rating the amount of responsibility and satisfaction they felt during the meeting. Each S also indicated the number of times he wanted to speak but felt unable to do so, that is, his "participation frustration." Finally, the PRS measure was repeated at the end of the role-playing sessions to determine whether or not participants had actually played their assigned roles.

Results

Figure 1 compares participation under both role-playing procedures. The assigned roles were clearly followed under role repetition. Analysis of variance of post role-playing PRS means of the "gateopeners," "gateclosers" and "silent members" were highly heterogeneous (Table 2). In addition, direct difference *t* tests were made, comparing characteristic PRS ratings with PRS scores during role repetition (Table 3). Ordinarily passive members (low PRS)

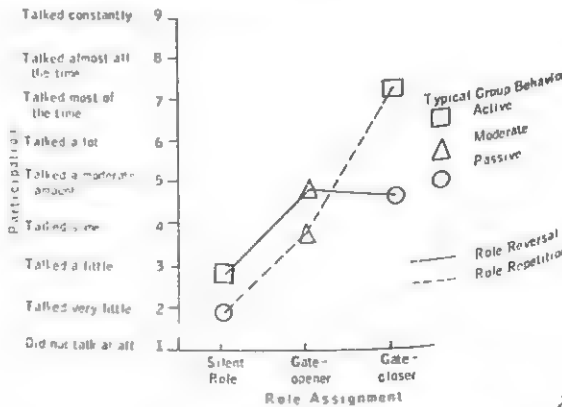


Fig. 1 Participation under role-reversal and role-repetition techniques.

Table 2

Analyses of Variance of Participation (PRS) and Responsibility Scores for Gatecloser, Gateopener and Silent Role Ss After Role-Reversal and Role-Repetition Techniques

Role Reversal	Participation Scores Analysis		
	df	MS	F
Between Role Assignments	2	12.78	7.83 ^b
Within Role Assignments	23	1.63	
Total	25		
Role Repetition			
Between Role Assignments	2	61.89	34.03 ^c
Within Role Assignments	20	1.82	
Total	22		
Role Reversal	Responsibility Scores Analysis		
	df	MS	F
Between Role Assignments	2	14.68	4.41 ^a
Within Role Assignments	22	3.33	
Total	24		
Role Repetition			
Between Role Assignments	2	44.22	12.21 ^c
Within Role Assignments	20	3.62	
Total	22		

^a $p < .025$

^b $p < .005$

^c $p < .001$

in the "silent" role decreased in participation (mean decrease = 2.17, $t = 5.94$, $p < .001$), while the active members (high PRS) in the "gateclosing" role showed a significant increase in participation (mean increase = 1.51, $t = 2.63$, $p < .05$). In other words, for both passive and active Ss, role repetition instructions clearly lead to an *exaggeration* of characteristic behavior. For the "gateopeners," there was a

slight but statistically non-significant decline from their characteristic (mid PRS) participation.

A different pattern of participation ensued under role reversal (Fig. 1). Those in the "gateopening" role made a slight, non-significant increase in participation. High PRS members, who were assigned a "silent" role (talking only when asked), played that role, showing a marked drop from their typical participation (mean decrease = 3.41, $t = 13.54$, $p < .001$). The characteristically passive participant had difficulty fully enacting the "gateclosing" role; nevertheless, the passive individuals *did* show a statistically significant *increase* over their customary group participation (mean increase = 1.18, $t = 2.68$, $p < .05$). The means for the three roles were heterogeneous (Table 2), with "gateclosers" and "gateopeners" participating equally, and with both these groups talking significantly more than Ss assigned the "silent" role.

The number of times a S wanted to talk but felt unable to do so (participation-frustration) did not yield data permitting a parametric analysis because of a skewed distribution and a high frequency of zero scores. Table 3 presents the median participation-frustration (PF) scores. The data for all six groups were converted to ranks and analyzed by the Kruskal-Wallis H test (yielding an H of 13.90, significant at the .02 level). Inspection of the sum of ranks indicated that the "gateopeners" under role repetition were obviously higher in PF than

Table 3

Reactions of Psychiatric Patients to Role-Reversal and Role-Repetition Training Techniques

Role Assignment	Mean Characteristic Participation	Role Repetition (PL 8)		Mean Satisfaction	Mean Responsibility
		Mean Role-playing Participation	Median Participation-Frustration		
Silent	3.94 (Low PRS)	1.77	1.00	4.78	3.56
Gateopener	5.00 (Mid PRS)	3.82	4.00	5.33	5.67
Gatecloser	5.64 (High PRS)	7.15	.50	4.62	8.12
Role Assignment	Mean Characteristic Participation	Role Reversal (PL 7)		Mean Satisfaction	Mean Responsibility
		Mean Role-playing Participation	Median Participation-Frustration		
Silent	6.02 (High PRS)	2.61	3.00	5.67	4.56
Gateopener	4.41 (Mid PRS)	4.81	.07	7.00	5.78
Gatecloser	3.36 (Low PRS)	4.54	.17	7.14	7.29

the remaining groups. Accordingly, data for these Ss were omitted and another Kruskal-Wallis H test was made by reranking the remaining data. The obtained H of 11.26 was significant at the .05 level. Inspection indicated that the "silent" role under role reversal produced significantly high levels of frustration. When this group of Ss was eliminated and the remaining four groups reranked and compared, no significant heterogeneity remained. These results make it clear that the "gateopeners" under role repetition felt frustrated in their attempts to participate, even though they actually participated more than the "silent" members.

To summarize the findings thus far, the method of role repetition produces an exaggeration of the characteristic roles of the passive and active members. And although disparity in the participation of the active and passive members is even greater than usual, *the passive members do not report much frustration in being kept out of the discussion.* Under role reversal, characteristically active members can shift easily to more passive roles, but in doing so experience a sense of being closed out of the group discussion. Characteristically passive members show an increase from their typical participation, yet clearly cannot play the role description fully.

Figure 2 compares the feelings of responsibility under both types of exercises. Regardless of whether the role-reversal or

the role-repetition method of conducting a discussion was used, "gateclosers" feel the greatest responsibility for the meeting, "gateopeners" are next, and "silent" members feel the least responsibility. These differences in feelings of responsibility in the three roles are highly heterogeneous (Table 2). A point of interest concerns the high level of responsibility experienced by the "gateclosers" under role reversal, the passive individuals who did not actually reach a high level of participation. Apparently the increase in participation which these passive individuals did undertake was a dramatic increase from their own perspective, an increase important enough to them to produce noteworthy feelings of responsibility.

Table 4
Pearson Correlations Among Satisfaction (S), Responsibility (R), and Participation (P) Variables Compared for Role-Reversal and Role-Repetition Techniques

Role	N	Role Reversal Variables Correlated		P-R
		S-R	S-P	
Gateopeners	9	.86**	.21	.23
Gateclosers	7	.78*	.00	-.14
Silent	9	.50	-.36	-.07
		Role Repetition Variables Correlated		
		S-R	S-P	
Gateopeners	9	.93**	.59	.50
Gateclosers	6	-.53	-.48	.66
Silent	8	-.04	-.49	-.19

* $p < .05$

** $p < .01$

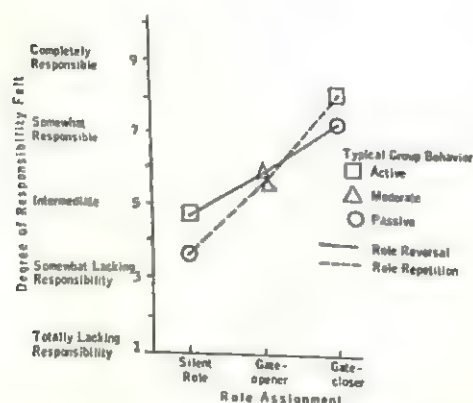


Fig. 2 Feelings of responsibility as rated by role-playing participants under role-reversal and role-repetition techniques.

When reported satisfaction with the discussion was compared for both role-training methods, all Ss indicated far greater satisfaction under the method of role reversal (Table 3), regardless of the role in which they participated (mean difference = 1.69, $t = 2.60$, with 46 df , $p < .02$). There were no differences in the levels of satisfaction reported as a function of role assignment within each technique.

In order to clarify the reasons why the role-reversal technique produced greater satisfaction for all participants, Pearson correlations were computed for the results on the Satisfaction (S), Responsibility (R) and Participation (P) scales (Table 4).

The results for the characteristically passive individuals under role reversal are of particular interest here. For these passive individuals playing the "gateclosing" role, the correlation between satisfaction and responsibility was .78 ($p < .05$). Their satisfaction did *not* correlate significantly with the degree to which they actually participated ($r = .00$), and their responsibility scores did not correlate significantly with their participation scores. These findings support the earlier inference that the high sense of satisfaction obtained by the characteristically passive members under role reversal depended more upon the personal experience of responsibility they obtained in the exercise than upon the amount of actual participation.

This same pattern of results appears to be true for Ss in the "gateopening" role under *both* role-training methods. The correlations between satisfaction and responsibility were quite high (for role reversal, $r = .86$, $p < .01$; for role repetition, $r = .93$, $p < .01$). Here again, satisfaction appears to depend more upon the sense of responsibility obtained in the exercise than upon participation directly, for the correlations of satisfaction with participation are of a lower order.

Quite a different pattern of results was obtained for the characteristically active individuals in the exercise. The correlations between satisfaction and responsibility were compared for active and passive members in the "gateclosing" role by means of a Z_r transformation (Walker & Lev, 1953). The obtained Z of 2.44 was significant at better than the two per cent level. The results suggest very clearly that while the typically "silent" members were experiencing considerable satisfaction from their feelings of responsibility while playing the "gateclosing" role, the typically active members, repeating their roles in "gateclosing," experienced dissatisfaction with their high level of responsibility. Although the correlation of $-.48$ between satisfaction and participation is not statistically significant for the "gateclosers" under role repetition, it is similarly suggestive of the same pattern of results. To explore this possibility, a final

comparison was made between the positive correlation between satisfaction and participation obtained by the "gateopeners" under role repetition and the negative correlations of $-.48$ and $-.49$ obtained by the "gateclosers" and "silent" members under role repetition. Again, using a Z_r transformation, Z 's of 1.97 and 2.11 respectively were obtained, both of which are significant at beyond the five per cent level. It appears, then, that "gateopeners" were deriving satisfaction as a result of their participation, while the "gateclosers" were not, and probably were dissatisfied with their participation. Apparently when characteristically active members were told to repeat their roles in small-group discussions, they did so, experiencing a high sense of responsibility for control of the meeting, but, at the same time, feeling dissatisfied with their behavior. The role-repetition technique probably causes the highly active individuals to focus on their own behavior with considerable discomfort.

The comments made by Ss during role assignment under the two role-training methods are both enlightening and provocative. Under the method of role reversal, the typically active members accept their silent roles grudgingly; they may feel they are being "singled out"; they feel "there won't be any meeting without us in it." Passive members are aghast when they are assigned a "gateclosing" role. They sit up in their seats and ask what topic is to be discussed, making it clear that they have not been listening when the topic was described earlier in general assembly; their lack of knowledge of the topic to be discussed is a dramatic uncovering of a frequent rationalization a passive member often makes: "I'll only talk when I have something important to say." Passive members also claim that it will be impossible for them to play the role of "gateclosers" in their group and exclaim that the active members in their group cannot be silenced under any condition: "They'll have a nervous breakdown if they shut up." Over all, passive members react to "gateclosing" role assignments as if they had been surprised and startled. Group members assigned the

role of "gateopeners" are horrified. As they read their task they see that they are to help the typically active member enter the discussion. Since they do not know a "silent" role has been given to the ordinarily active members, they see their task as ridiculous, "like throwing gasoline on fire." They feel the staff is being sarcastic or simply blind.

At the completion of the role-playing exercise, the scale data filled out by participants are summarized and discussed in general session. The mood and atmosphere following the role-reversal technique are ones of mirth and humor, confirming the data cited earlier that the method of role reversal produces a higher level of over-all satisfaction than the method of role repetition. A lively discussion generally follows the role-reversal exercise. One passive individual pointed out, "I know that I always take the easy way; I never take any responsibility; I always let the others do it." A very aggressive, dominating group member commented that, "I got a big kick out of listening to some of those quiet guys talk; they made a lot of sense; I never would have expected it from them."

One observes quite different reactions to the role-repetition technique. During role assignments, the passive members listen passively (and perhaps complacently) as their roles are assigned and described. The "gateopeners" (given the role of bringing the "silent" members into the discussion) groan, feeling they have been given an impossible task (as we have seen from the research data, their task does indeed prove to be difficult). Typically active members, assigned the "gateclosing" role, move into action almost immediately. Active members from the same group usually formulate a plan for cooperating to monopolize the ensuing discussion. They clearly know the topic to be discussed. In the general discussion following the role-repetition exercise, there is little participation from the typically active or passive members of the groups. The "gateopeners" (who felt frustrated in their attempts at trying to get the passive members to participate) express irritation and annoyance toward the gate-

closers. The atmosphere during this feedback is tight and grim.

Discussion

Based on both the research data and clinical observation, the over-all impression is that the method of role reversal enables small groups of psychiatric patients to examine participation styles in a friendly, non-threatening way. The typically passive patients, however, experience difficulty in playing extremely active roles. In this respect, our results are similar to those of Tupes, Carp, & Borg (1958), who found that role-playing ability was related to measures of adjustment and to one's rating as an "all-around person," and also Borgatta's (1961) findings that individuals judged as assertive from peer ratings during group discussions responded more actively to role playing than less assertive men. Borgatta also found that assertive men enjoyed role playing more than passive men. In the present study, however, the level of satisfaction depended instead on the role-playing technique used rather than upon the traits of the individual playing the role.

Role repetition appears to offer less than role reversal as a technique of interpersonal training and as a means for promoting self-awareness. Typically active individuals, in the "gateclosing" role, do receive feedback from the "gateopeners," who feel irritated and annoyed at their frustration in trying to bring the "silent" members into the discussion. As we originally conceived the exercise, we expected the active members to learn from this feedback (e.g., "I frustrate people when I talk too much.") and reasoned the feedback would be non-threatening since active members would merely be fulfilling role assignments on this occasion. The research data suggest, however, that typically active individuals are uncomfortable about their high level of participation during the exercise, and our own personal impressions of the grimness with which the feedback is received do not commend the technique.

Inevitably, of course, the question arises as to whether the role-reversal method is capable of generating lasting changes in

behavior. Only tentative evidence is available. As mentioned earlier, role reversal is used in the Patients' Training Laboratory (Rothaus et al., 1963) during the first week of a four-week program. The patterns of group participation during the last three weeks have been partially analyzed. Clearly, as time passes, there is a reduction in the variance of group participation scores. Highly active individuals talk less, passive individuals talk more. It would be presumptuous, however, to attribute these behavioral changes to the impact of role reversal. Too many other experiences in the four-week period could just as easily produce this change.

A final question worthy of attention is why passive patients find role reversal so difficult. Our clinical impressions suggest these possibilities: (a) *Skill deficiency*—Group participation requires skill which passive patients often lack and cannot develop suddenly at a moment's call in response to role-playing instructions. (b) *Response avoidance*—Passive patients may have learned to fear interacting assertively, sometimes because they have powerful hostile fantasies which they are straining to keep under control. They avoid participation out of fear of loss of control. (c) *Displaced frame of reference*—Again, passive patients may have an uncommon frame of reference for what constitutes adequate social participation. It is almost as if their entire "internal participation scale" is displaced downward. Our research findings indicated, for example, that only small amounts of participation were sufficient to produce in passive patients pronounced feelings of responsibility. (d) *Assertiveness-hostility confusion*—Passive patients may perceive assertive behavior as dominating and hostile behavior, or at least equate assertive behavior with hostile behavior, suppressing assertiveness out of fear of being perceived as hostile. (e) *Responsibility avoidance*—Occasionally one suspects that passive patients fear taking any assertive action which will lead other people to expect to be able to depend upon them. The passive patient wants a one-way path for his own extensive dependency demands up-

on other people. (f) *Fear of failure and humiliation*—Passive patients often report a fear of failure and public humiliation (low self-confidence) and prefer "no action" to action which may be criticized. (g) *Stimulation avoidance*—Passive patients seem to avoid being stimulated by situations. They look bored and detached as if they were warding off arousal. One might go so far as to predict that passive patients would have a much greater tolerance for sensory deprivation than active group participants. In any event, the historic dynamics behind such stimulation avoidance are open to speculation.

Summary

This study investigated two techniques for changing a person's typical behavior during role playing. Psychiatric patients in a human relations training laboratory were rated for their typical participation in small group sessions and were divided into categories of active, moderate and passive participation. Twenty-three Ss were assigned to take roles similar to their own in group discussions (role-repetition technique) and 26 Ss were instructed to reverse their usual role behavior (role-reversal technique). Rating scales were completed by group members after the experimental discussion. The following results were obtained: (a) Under role repetition the person's usual style of participation was exaggerated. (b) Under the role-reversal condition, typically passive individuals experienced more difficulty carrying out their role assignment than typically active individuals. Reasons why passive patients may find role reversal difficult were explored. (c) Passive members playing a passive role do not report frustration, whereas active members playing passive roles feel highly frustrated. (d) Regardless of typical behavior, Ss assigned the active "gatecloser" role feel more responsible, and those assigned the "silent" role feel less responsible for the group discussions. (e) The role-reversal technique results in greater feelings of satisfaction for all participants than does the role-repetition technique. (f) Clinical impressions of staff observers indicate the role-reversal tech-

nique is the more promising method for producing behavior change in small groups.

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Comment

Role playing has been used typically as a combination stimulator, response vehicle and exerciser of proscribed behaviors. During the course of a role playing exercise or between sessions attempts are frequently made to somehow modify or extend the repertoire of knowledge and skills which the subject initially brought to his assigned role. The general consensus among users of these techniques is that role playing results in altered behavior changes transferable to real life situations (with beneficial results). However, the popularity of role playing as a therapeutic and educational tool has grown more rapidly than explicit understanding of what contributes to its alleged success. To date the welter of enthusiastically applied methods characterized by loosely identified and casually controlled variables has yielded a "paucity of experimental evidence" regarding the effectiveness of different approaches.

The preceding study represents a more heartening trend in its aim to experimentally compare the usefulness of two role playing techniques for altering behavior. It demonstrates some ingenious methodology which recommends itself for continued application among practitioners and researchers. It also reveals a weakness common to

research on therapeutic techniques: poor outcome measures. This increases the chances for less than parsimonious or frankly erroneous conclusions regarding obtained findings. A reanalysis of the findings in the preceding paper provides a case in point.

Reference is made to the table below, which is adapted from Table 3 of the Rothaus article. This reorganization of data makes the assumption that the behavior of two equated groups would be the same if one group had practiced both role repetitive and role reversal techniques. Cast in its present form the data demonstrates the value of these two role playing techniques for "testing the limits" of a subject's behavioral repertoire. Both the characteristically silent and active groups responded similarly to standard instructions to minimize and maximize their social participation. These similarities are the more striking when groups are compared in terms of percent change from their characteristic participant scores. For instance, when silent and active groups were instructed to maximize verbal participation (through either role reversal or role repetitive methods), their participant scores increased 35% and 27% respectively. When instructed to minimize their participation, there was a

55% and 57% decrease in their participant scores. Both groups found it easier to lessen rather than increase their group participation. This suggests that each had more capability for changing behavior in the "verbal restraint" than in the "verbal activity" direction. Because psychiatric patients are allegedly poor social participators? Perhaps. However, a more parsimonious explanation of the obtained finding is that prior exposure to the Training Lab situation was itself a sufficient stimulus for eliciting a certain amount of "verbal activity" behavior. Thus committed in their pre-test "characteristic" performance, each group had relatively less to show when instructed to further increase "verbal activity" behaviors under test conditions. Herein lies the prime significance of the preceding

direction in which individuals were most capable of showing change—given a certain repertoire of behavior. Based on participant scores, the passive group showed a much more restricted range of appropriate behaviors (1.77 to 4.54) than did the active group (2.61 to 7.15). Repertorial differences in *kind* as well as degree appear under conditions which tend to "test the limits" of behavioral capabilities. The performance of the characteristically active group suggests less capability for "verbal restraint" behavior, while that of the characteristically silent group suggests lesser resources for performing in a verbally active fashion.

While the absence of appropriate outcome criteria stopped this study short of actually evaluating role playing techniques

Deviations from Characteristic Participation Scores
as a Result of Instructions to Increase or
Decrease Participant Performance*

Mean Characteristic Participation Score	Condition A		(Instructed to Maximize Participation)	
	Mean Role Playing Participation Score	Score Diff.	% Change From Characteristic Participation Score	Type of Role Played
(Silent) 3.36	4.54	+1.18	+35%	role-reversal
(Active) 5.64	7.15	+1.51	+27%	role-repetitive
	Condition B		(Instructed to Minimize Participation)	
(Silent) 3.94	1.77	-2.17	-55%	role-repetitive
(Active) 6.02	2.61	-3.41	-57%	role-reversal

*Adapted from Table 3, Rothaus et al.

study. It highlights the critical importance of attempting to ascertain the scope, content and degree of mobilization of a subject's behavioral repertoire *prior to* evaluating the effectiveness of methods aimed at producing substantial and enduring changes in it. Contrary to the interpretation offered by the authors, this analysis of the same finding suggests that the training situation and the role repetitive and reversal exercises had virtually the same *relative* impact on characteristically passive and active subjects. Moreover, the degree of behavioral change elicited was not a function of the method used, but of the

as behavior changing variables, it remains a significant piece of work in that it suggests a workable means for utilizing role playing techniques as a reliable method for sampling and objectively assessing the repertoire of behavior which a person is capable of using in a given situation at a given time. This is an all important prerequisite for any subsequent evaluation of methods designed to modify behavior in predicted directions.

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Toward an Integration of the Didactic and Experiential Approaches to Training in Counseling and Psychotherapy^{1,2}

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An attempt to describe a view of supervision which integrates the didactic and experiential forms of supervision. Training in counseling and psychotherapy is viewed as a therapeutic process: a learning process which takes place in a particular kind of relationship leading to self-exploration. The view is implemented in a therapist training program which is currently in progress and which relies heavily upon the use of tape recorded psychotherapy and measurement scales growing out of research designed to quantify essential aspects of the therapeutic relationship in the context of a meaningful relationship.

Supervision or training programs in the fields of counseling and psychotherapy have been formulated traditionally in terms of a didactic-intellectual approach which emphasizes the shaping of therapist behavior or the experiential-accepting approach which focuses upon therapist growth and development. The present paper is an attempt to describe a view of supervision or training which would integrate the ex-

periential and the didactic orientation. In the present view supervision is itself viewed as a therapeutic process: a learning process which takes place within the context of a particular kind of interpersonal relationship which is free of threat and which facilitates self-exploration.

The Didactic Approach

The didactic approach is supported by theorists holding that supervision represents the *conscious* effort of a profession to "program" future therapists with the proper "sets" and repertoires of correct responses (Krasner, 1961, 1962). The approach, as typified by Wolberg (1954) and Thorne (1950), includes supervisors who emphasize the more didactic aspects of shaping therapist behaviors. It is natural that learning principles, to the extent that they are currently known, be applied to the acquisition and performance of therapeutic behavior. Such a view has led to

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the assumption that traditional educational procedures are effective means of shaping desired therapist behaviors.

The teacher-supervisor brings to bear in supervision his accumulated store of knowledge, born perhaps of his own experience and the experiences of others which may, themselves, have been passed on to him in didactic formulations. Often, then, the supervisory process may be seen as involving overt reinforcement to produce performance of desired therapist behaviors and lack of reinforcement or even punishment to produce extinction of undesirable therapist behaviors. Some have gone so far as to characterize this kind of supervision or training for therapists as a forced modification of both behavior and thinking to conform to that of the teacher-supervisor: in Winokur's (1955) terms, "brainwashing."

The implicit paradox involved in didactic supervision is that often the conditions, techniques, attitudes which the future therapist is "taught" to employ are precisely *not* the conditions and attitudes acted out by the supervisor himself. In fact, they may be antithetical conditions. To be sure, many of the more didactic supervisors find thoughts of "forced modification" or even the "programming" of supervisee behavior repugnant. How often the teacher-supervisor in his attempt to communicate the findings of his accumulated knowledge is unaware that the supervisee does not receive the conditions conducive to his freedom and openness to self-exploration! Clearly the trainee does not experience an analogue of therapy: he does not get from his supervisor a chance to experience a role model of therapist which he might compare with other role models or imitate in psychotherapy. Perhaps he is even denied the opportunity for self-exploration which together with the opportunity to tap prior knowledge in the field might be expected to produce an effective therapist.

Perhaps even worse, caught in the implicit double bind, the trainee may re-enact in therapy the contradictions between the content of what the supervisor is telling him to do as a therapist in therapy and

what the supervisor himself does in supervision.

The Experiential Approach

With a somewhat healthy aversion for the doctrinaire "technicianship" which the didactic approach is accused of fostering, many (Boehm, 1961; Towles, 1962; Wessel, 1961) emphasize the importance of genuine acceptance and respect for individuality. These supervisor-offered conditions are calculated to nurture in the trainee feelings of safety and freedom which promote openness to experience and a willingness to experiment. Here, the focus is upon the experiential aspect which is perhaps best exemplified by the client-centered orientation (Rogers, 1957):

The general principle which seems to apply here is that if the climate of the teaching situation, and the relationship between the teacher and the beginning counselor, are the same as the climate and the relationship which exist in therapy, then the young therapist will begin to acquire a knowledge in his viscera of what the therapeutic experience is (p. 81).

The goal of such experience in the supervision process, as formulated by Rogers, is: The student should develop his own orientation to psychotherapy out of his own experience. In my estimation every effective therapist has built his own orientation to therapy within himself and out of his own experience with his clients or patients. It is quite true that this orientation as finally developed may be such that it closely resembles that of others, or closely resembles the orientation to which he was exposed. Nevertheless, the responses made by the effective therapist in his interviews are not made in a certain way because that is the psychoanalytic way, or the client-centered way, or the Adlerian way, they are made because the therapist has found that type of response effective in his own experience. Likewise, he does not put on certain attitudes because those are the attitudes expected of an analyst or client-centered therapist or an Adlerian. He discovers and uses certain attitudes in himself which have developed because they have been rewarded by the effective outcome of earlier experiences in carrying on therapy. Thus the aim of a training program in therapy should be to turn out individuals who have an independent and open attitude toward their own experience in working with clients. If this is achieved, then they can continually formulate and reformulate and revise their own approach to the individuals with whom they are working in such a way that their approach results in more constructive and effective help (p. 87).

While the experiential group shuns thoughts of control in therapy supervision or in therapy (Rogers and Skinner, 1956), they must concede, although perhaps reluctantly, that they are deeply engaged in the influencing of trainee behavior. They influence therapist behavior subtly, no doubt, by exposure and initiation of the social imitation process. They influence behavior by instituting certain attitudinal conditions in which, protestations to the contrary, the trainee has no more voice than he does in didactic supervision and from which certain behavioral consequences are anticipated, if not predicted. Perhaps, unlike the conscious efforts to "program" of the didactic approach, the experiential approach represents the *unconscious* efforts of a profession to "program" future therapists.

Toward an Integrated Supervisory Approach

Both the didactic and the experiential orientations in essence provide the trainee with a stimulus complex. The stimulus complex, itself, determines the probability of the trainee responding to one kind of behavior in therapy rather than another as well as determining the probability of contingencies related to his effectiveness (Ashby, Ford, Guernsey, & Guernsey, 1957; Dinoff, Rickard, Salzberg, & Sipprelle, 1960; Fey, 1958; Fiedler, 1950, 1951; Holt & Luborsky, 1958; Krasner, 1962; Lakin & Lebovitz, 1958; Strupp, 1955, 1955a, 1960). To be sure, the impact of early supervision and training is greatly modified by the kind and patterning of reinforcement received from real patients as he practices the art of psychotherapy. It is perhaps this openness to feedback from patients which results in the learning, relearning, and unlearning that produces effective psychotherapists.

The didactic orientation emphasizes passing down an accumulated store of knowledge in the traditional learning setting. Clearly, the flow is downward. That is, for the student the experience is one of accepting and incorporating a set of "es-

tablished" premises, from which he may deduce certain modes of doing things in therapy. In contrast, while the experiential approach nurtures, elicits and even predicts behavioral change on the part of the supervisee, it focuses upon instituting certain attitudinal conditions. The belief is that growth, born of the trainee's own experience, will follow. In generalizing from experience, the flow is upward. Thus, the didactic orientation is largely deductive and the experiential orientation is largely inductive.

These two orientations need not be mutually exclusive in psychotherapy training. The process of learning for both supervisor and supervisee in supervision is not unlike the see-saw process of theory-building in general: an interactional process of inductive generalizations from experience which qualify and modify the deductions of earlier experiences and which, in turn, are qualified and modified in deductive testing. The approach set forth in the present paper incorporates both the didactic and the experiential approach: the therapist supervisor brings to bear his knowledge of therapy accumulated from his own experience and the experiences and work of others *in the context of a therapeutic relationship* which provides for the trainee the conditions which research and clinical learning suggest are essential for psychotherapeutic personality change.

Briefly, the therapy supervision is itself viewed as a special form of psychotherapy: as a learning process which takes place in a context of a particular kind of deep and meaningful relationship which facilitates this learning (Truax & Carkhuff, 1963). This deep and meaningful relationship is a product of a stimulus complex of therapist offered conditions which in their specifics operationalize the heretofore vague "something more," which has been attributed to the therapeutic relationship itself. This specific stimulus complex elicits certain trainee responses which are believed to be critical to his learning and growth. Within the context of the stimulus complex, many learning approaches, including

even more didactic approaches attempting to "shape" behavior, are most effective.

This integrated approach to the training of psychotherapists has grown out of a program of research into the processes of individual and group psychotherapy which appears to have identified three of the critical aspects of the therapist's behavior which predictably relate to self-exploration (Truax, 1963; Truax & Carkhuff, 1963a, 1963b). Self-exploration, in turn, has been shown to be predictably related to personality growth or constructive personality change in patients as measured by a wide variety of personality and behavioral criteria. Assuming the analogy between the personality and behavior change seen in therapy and the goal of behavior change (restricted presumably to therapist behaviors) in therapy supervision, it would follow that trainees who are able to explore themselves would be ones showing greatest positive change in their therapist behaviors. Trainee's self-exploration, is then, here posited as one of the critical elements in supervision, whether that supervision is aimed at producing analytic, client-centered or eclectic therapists.

The therapeutic relationship is seen as an essential part of any training program in providing the means for the trainee's working through his own feelings, values and attitudes and in general discovering his effective self in therapy. Self-exploration, in addition, affects how the trainee is able to operationalize his intellectual learnings of "how to be a good therapist," regardless of the orientation used. In the proposed integrated training program the supervisor would be continuously in his contacts with the trainee attempting to provide the therapeutic conditions which would lead to this self-exploration on the part of the trainee.

The three characteristics of a therapeutic relationship which have been found to causally determine the depth of self-exploration on the part of the therapist include: therapist empathic understanding, therapist non-possessive warmth and therapist self-congruence or transparency. When these

therapeutic conditions were maintained at relatively high levels in an experimental study of psychotherapy, client self-exploration was high; when these conditions were lowered self-exploration dropped; when a relatively high level of conditions was re-established self-exploration consequently returned to a relatively high level (Truax & Carkhuff, 1963c). Applying this to the training process it would be predicted that the trainee's growing awareness of intellectual content and learnings in psychotherapy in the context of a relationship which nurtures his own self-exploration would lead to his growth as a therapist.

Such an approach has direct implications for both the didactic and the experiential supervisory approaches. The experiential orientation should become aware of the role of the supervisor as a direct influencer and even controller, however subtly, of behavior. This awareness of the controlling nature of the experiential approach would hopefully lead to a more open stance toward the potential explication and understanding offered by learning theory principles. On the other hand, the didactic school of thought should come to recognize the capacity of supervisor-offered conditions, or if you will, the therapeutic relationship, to elicit greater depth of self-exploration by the supervisee and thus the importance of experiential factors in the learning process.

The proposed integrated approach combining both didactic and experiential viewpoints would provide a training approach where the past (in the form of the accumulated knowledge) may be brought to bear in an alterable form in a relationship which elicits the value of a potential heretic present (in the form of the client's current experiencing).

Toward Implementation

Since the training of a therapist clearly involves behavioral changes in the trainee, the variables found to be effective in psychotherapists should logically be applied to the supervisor relationship (Truax, 1962; Truax & Carkhuff, 1963b). This implies,

for example, that the supervisor should provide the conditions of empathic understanding and unconditional warmth for the trainee in a relationship characterized by transparency and self-congruence. It should be emphasized that these supervisor-offered conditions facilitate self-exploration in the trainee by providing the freedom and safety of the relationship and thus an openness to the trainee's experiencing and consequent experimentation. The offering of such therapeutic conditions would not only be expected to contribute to the trainee's growth through self-exploration but also to provide the trainee with a clear and observable model of the therapist. This clear and observable model of a therapist could be used by the trainee as one for imitation and for comparison with other models.

Within the therapeutic relationship a contribution to the integration of didactic and experiential modes of learning can be made through the application of research tools to the job of training future therapists. The beginning therapist could be exposed to tape recorded samples of counseling or psychotherapy rated very high in therapist-offered conditions (Gendlin, 1962; Truax, 1962; Truax & Carkhuff, 1963b). Tape recorded excerpts from psychotherapy can also be used to bring to the trainee's awareness typical specific problem areas and conflicts (Carkhuff, Feldman, & Truax, 1963; Feldman & Carkhuff, 1963). Thus, in essence, learnings from the past may be offered to the trainee in the form of concrete examples. The value of concrete examples is perhaps underlined by recent research (Truax & Carkhuff, 1963d) which suggests that concreteness or specificity in therapy is a critical element accounting for behavioral change.

Further, the recent rating scales used to measure the degree of therapist-offered conditions of empathic understanding, non-possessive warmth and the transparency of the relationship can be adapted to become tools for training. The trainee's own early cases and interviews can be recorded and then rated so as to give him immediate and concrete informational feedback telling

him how well he is learning to operationalize the concepts involved. Also, familiarizing the trainee with the scales designed to measure patient self-exploration would provide him with an additional tool to help him know early in the psychotherapeutic relationship when he is helpful and when he is not helpful. The use of actual tape recorded excerpts of psychotherapy in conjunction with the measuring scales developed for research would constitute a striking departure from many current training practices which heavily emphasize intellectual learning or focus only upon providing experiential conditions. They would provide the trainee on the one hand with vicarious experiential learnings and on the other would didactically provide positive and negative feedback directed at his own experiences. It should be emphasized that the flow is not simply deductive. "Effective" therapy by some trainees may well involve dimensions other than the presently posited constructs. As supervisors, then, we must work to generalize and operationalize and research these new findings.

A Tentative Therapist Training Program in Operation

Currently, a highly specific pilot-program for therapist training of both lay persons and professional level psychotherapists is underway at Kentucky. A description of the current tentative program will perhaps best illustrate the viewpoint integrating the didactic and the therapeutic approach to the training of psychotherapists. In general format, this approach could be used by eclectic, client-centered, analytic or behavioristic therapists.

Central to the program is the interaction of trainee and supervisor. The supervisor in his interaction with the trainees attempts to provide the therapeutic conditions of empathic understanding, non-possessive warmth and transparency, so as to facilitate self-exploration on the part of the trainee. Each week, the beginning trainees meet in group and individual "therapy" sessions with the supervisor where they focus upon their own feelings and experiences in

relation to their attempts to be helpful in the therapeutic relationship with patients. During these quasi-therapy sessions the trainee has the opportunity to explore his own values, his life choices, his feelings about the patient, his feelings of adequacy and inadequacy, his fear of being phony, etc. Thus trainees may explore and focus upon their inhibitions in expressing warmth and caring for their patients, their feelings of hostility or anger at certain patients, or their own anxieties and fears.

The therapeutic relationship is one central focus of the training program. The other, and perhaps equally important focus of the training program, lies in the specific trainings which teach the trainee the art of psychotherapy. Since recent research has confirmed the almost universally posited importance of therapist accurate empathy, non-possessive warmth and genuineness or self-congruence for the facilitation of personality change in the patient, these elements were chosen for the specific training goals. It seems to be generally the case that therapists of analytic, client-centered or eclectic persuasion who are effective generally provide relatively high levels of these conditions. To be sure, effective therapists also do other things and offer other conditions. These, however, would seem for the present to be at least three of the basic conditions.

Making use of theoretical and clinical descriptions the prospective trainees are didactically taught the conditions of accurate empathy, unconditional positive regard and therapist self-congruence or genuineness.

Secondly, the trainee is presented with excerpts of psychotherapy conducted by a wide variety of therapists that are rated high, medium and low on these three therapist conditions by raters trained in the use of the three research scales.

Following this, the trainee is then trained to be a rater himself in the use of each of the research scales. Consequently, he learns to operationally discriminate between specified levels of the dimension of therapist accurate empathic understanding, therapist non-possessive warmth for the patient and

therapist genuineness or transparency in the relationship.

Thus, after this preliminary training the therapist trainee has learned to recognize and discriminate levels of the effective therapist-offered conditions.

Subsequently, the trainee is given empathy training. A group of trainees are presented with a series of tape recorded patient statements. The trainee listens to the statements and is then asked to reformulate the essential communication both in terms of feeling and in content of that communication. This is probably most easily accomplished by having the supervisor periodically stop the tape recording and randomly point to a trainee who verbally responds. The situation, then, demands that each trainee listen intently and focus upon the *meaning* of the patient's communication and develop the facility in verbalizing this. Such a procedure would tend to sharpen the trainee's sensitivity and his listening skills and understanding of the meaning of a patient's communication.

After mastering this the trainee is given role playing experience, by pairing off with another trainee where he practices the role of a "therapist." This role playing of the therapist is tape recorded itself. The trainee then takes the recording and he himself rates his own "performance" as a therapist on the therapeutic conditions scales. He thus has an opportunity to critically evaluate his own beginning attempts as a therapist to offer understanding, warmth and genuineness. Selected samples of this role playing also rated by experienced raters provide a standard comparison with his own ratings.

After, and only after, the beginning trainee has attained moderately high levels of conditions in his role playing, the trainee is given experience with a large number of single therapeutic interviews. These single interviews are not intake initial interviews but instead are one-shot "therapeutic" interviews where the trainee's goal is to facilitate deep self-exploration by the patient. Each trainee is given a random selection of patients for single interviews

so that the focus will be upon conditions offered by the therapist trainee rather than upon the dynamics of the patient.

These single interviews, again, would be tape recorded and selected segments could then be rated by the trainee himself and by trained raters. Again, this would provide concrete feedback so that with a wide variety of patients the trainee would learn more accurately the elements of his behavior that contribute to a therapeutic relationship and the elements of his behavior which detract from that relationship.

After, and only after, the trainee has achieved moderately high levels of conditions with a variety of patients in single interviews and has also demonstrated an ability to facilitate moderately high levels of patient self-disclosure and self-exploration (determined by application of the research scales designed to measure patient self-exploration or depth of intrapersonal exploration) would a trainee begin to see patients in "psychotherapy." At that point he would begin supervised experience in the more usual continuing psychotherapeutic contact with a patient. Ordinarily, the trainee would start seeing the patients concurrently so as to minimize chance occurrences in the patient-therapist interaction from developing "superstitious behavior" on his part.

The trainee would continue to tape record and continue to rate himself from randomly selected samples of the cases which he has been assigned. Comparison ratings would periodically be made by trained raters evaluating both conditions provided in therapy and extent of self-exploration in the patient.

The present program is an attempt to provide an integrated program for the beginning therapist. It might be expected that the facilitative therapeutic conditions offered by the supervisor to the trainee would become more centrally important as the trainee became more experienced and advanced. It would be at the point where he had mastered the basics that his own experiences to alter and modify current learnings of how to do psychotherapy

would direct him toward providing a more effective and therapeutic relationship for his patients.

The current approach toward an integration of didactic and experiential approaches to training in psychotherapy and counseling would seem to have a number of advantages. The evaluation of a trainee's behavior would be based upon research measuring scales which have proven adequately reliable and valid rather than upon the supervisor's subjective evaluation. This would minimize the problem inherent in selecting and eliminating prospective therapists. It would also tend to remove that barrier to the communication between trainee and supervisor by removing the supervisor from the realm of evaluation. Clearly, supervisors who concern themselves primarily with the "weeding out" process are less likely to be able to offer all that is necessary for the trainee's growth.

Such a training program has the further advantage through its concreteness and its experiential nature of providing a basic training program consistent with what is theoretically and empirically known about an effective therapeutic relationship as a base from which trainees may later add more advanced specifics of any particular orientation (analytic, eclectic, behavioristic, client-centered, etc.).

Such a program in a step-wise procedure allows the trainee a chance to master more basic learnings before being thrown into a more complex and demanding relationship: he progresses through intellectual, vicarious and role-playing therapeutic experiences before being confronted with the complex demands of his first therapeutic encounters.

Summary

The present paper has been an attempt to describe a view of supervision which would integrate the experiential or therapeutic with the didactic forms of supervision. Training in psychotherapy and counseling is itself viewed as a therapeutic process: a learning process which takes place in a particular kind of relationship leading to self-exploration and personality

change. The analogy between therapy and therapist training leads logically to an emphasis upon providing the trainee with a therapeutic relationship and an opportunity for self-exploration concurrent with a specific program of didactic training.

The didactic training program described here relies heavily upon the use of tape recorded psychotherapy and measurement scales growing out of research designed to quantify essential aspects of the therapeutic relationship. In the context of a meaningful relationship, however, different didactic as well as supervisory approaches might be most efficaciously brought to bear.

The current tentative program illustrating one suggested implementation of this view was described in detail.

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Client Preferences for Affective or Cognitive Counselor Characteristics and First Interview Behavior

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The objective of this study was to evaluate the following hypothesis: Counselors who prefer affective counselor characteristics are more likely to focus on a discussion of personal-social problems during the first interview than are counselors who prefer cognitive characteristics. The preferences of 95 counselors were determined prior to their first counseling appointment. The first interview focus for those preferring affective counselor characteristics was compared with those preferring cognitive characteristics. The difference was significant at the .01 level of significance in the hypothesized direction.

Bordin (1955) reported that the characteristics the client deemed desirable for a counselor were related to the kind of problem the client presented in the interview situation. He found that counselors who felt that personal characteristics were desirable tended to seek counseling that involved personal-social concerns. Clients who felt that impersonal characteristics were more important than personal characteristics most frequently sought help with educational-vocational difficulties.

The objective of this study was to re-evaluate Bordin's findings using a somewhat different frame of reference. Instead of separating counselor characteristics on a personal-impersonal continuum, as Bordin did, they were divided on cognitive-affective continuum. The following hypothesis was tested: Subjects who consider affective characteristics more important than cognitive characteristics in a counselor are more likely to focus on a discussion of personal-social problems in the first interview than are subjects who prefer cognitive characteristics. Dipboye (1954) reported results which relate to the above hypothesis. He found that counselors tended to respond cognitively in interviews

where educational-vocational problems were discussed and affectively when personal-social problems were being considered. It can be inferred that counselors were reacting in part to the set of the counselors and responding cognitively or affectively according to the client expectations.

Procedure

An adjective check list was selected as the instrument to measure the counselor's attitudes toward counselor characteristics. The check list was composed of four adjectives, warm, kind, accepting and friendly, judged affective by the author; four adjectives, knowledgeable, poised, logical and efficient, judged cognitive; and four adjectives, sociable, ambitious, mature and successful judged neutral on the cognitive-affective continuum.

To determine if the author's judgments of the adjectives as affective, cognitive and neutral were consensually valid, five staff members of the Michigan State University Counseling Center were asked to serve as judges. Each judge was given a list of the twelve adjectives and asked to indicate by each adjective whether they judged it to

be cognitive or affective. The five judges were in total agreement with the author on the cognitive and affective adjectives. There was not total agreement on any of the adjectives judged neutral by the author.

A brief inventory (hereafter called the Cognitive-Affective Inventory) was constructed in the following manner. Each of the four affective adjectives was paired with one of the cognitive adjectives forming four pairs of adjectives. The four neutral adjectives were paired with each other, and were used as filler items. Directions for the Cognitive-Affective Inventory and the adjective pairings are given below:

Below is a list of six paired words. Look at each pair and then check the one of this pair you feel would be more important in a counselor. Check one word from each pair. For example:

Competitive _____ Intellectual X

The check beside intellectual indicates that the individual felt it would be more important for a counselor to be intellectual rather than competitive. Making a check by one does not necessarily indicate that you feel the other is unimportant or could be absent. It simply means you feel the one checked would be a more important characteristic for a counselor. Please indicate your opinions on the following six pairs of words and return this sheet to the receptionist.

- | | |
|-------------------|---------------------|
| 1. warm _____ | knowledgeable _____ |
| 2. poised _____ | kind _____ |
| 3. mature _____ | successful _____ |
| 4. logical _____ | accepting _____ |
| 5. sociable _____ | ambitious _____ |
| 6. friendly _____ | efficient _____ |

The inventory was scored by counting the number of affective adjectives checked by each subject.

Subjects used in the study were students at Michigan State University who were making an initial appointment with a

counselor at the MSU Counseling Center. The receptionist was asked to give 95 successive students seeking first counseling appointments the previously described Cognitive-Affective Inventory. The main function of the receptionist at the Center was to match the free hours of a student with the open hours of a counselor. Thus, she is free to make appointments with all counselors without regard for presenting problem. The receptionist was asked to follow her regular routine in making appointments with the exception of giving each student the Cognitive-Affective Inventory prior to making arrangements for the appointment. A total of 28 counselors had appointments with the 95 students included in the study.

Following the completion of each interview at the Michigan State University Counseling Center, the counselor fills in a contact card on which he indicates whether the primary focus of the interview was personal-social or educational-vocational. Contact cards were collected for the subjects, and the primary focus of the first interview was tabulated for each subject.

Results

Eighty-six subjects were included in the final sample. Nine were excluded for a variety of reasons, the most common being a failure on the part of the counselee to keep the scheduled appointment. The data for these 86 subjects are included in Table 1. The five cells in Row one of Table 1 show the number of subjects who checked zero, one, two, three or four affective adjectives and focused on educational-vocational problems during the first interview. The cells in Row two indicate the number

Table 1

The Number of Affective Counselor Characteristics Preferred by
Counselees and the Primary Focus of the First Interview

Interview focus	Number of Affective Characteristics Preferred				
	0	1	2	3	4
Personal-social	0	0	6	8	2
Educational-vocational	5	28	25	10	2
Total	5	28	31	18	4

who checked zero, one, two, three or four affective adjectives and focused on personal-social problems during the first interview.

An inspection of Table 1 shows a clear trend in the direction of the hypothesis. Of the thirty-three subjects (38 per cent of the sample) who checked zero or one of the affective adjectives, none focused on personal-social problems during the first interview. On the other end of the table there are 22 (26 per cent of the sample) who checked three or four affective adjectives. Ten of them discussed primarily personal-social problems during the first interview. Thus, 62 per cent of the subjects who focused on personal-social problems in the first interview were found in the 26 per cent of the sample that checked three or four affective adjectives.

In order that the data could be treated in a more statistically meaningful manner, the data in Table 1 were collapsed into a two by two table. Subjects who preferred zero, one or two affective adjectives were included in one group called the cognitive group; subjects preferring three or four affective adjectives formed the second group called the affective group. A chi-square was calculated to determine if the first interview behavior of the two groups was significantly different. The difference was significant at the 1% level of confidence confirming the hypothesis that counselees who consider affective counselor characteristics more important than cognitive characteristics are more inclined to

focus on a discussion of personal-social problems in the first interview than are counselees who prefer cognitive characteristics.

These data in conjunction with Bordin's findings clearly show that the characteristics the counselee considers significant in the counselor are indicative of the type of problem the counselee will discuss. Several questions are not answered by the studies. One of these concerns the underlying reason or reasons for the client's preferring personal or affective characteristics. It would be interesting to determine if these preferences are a product of the counselee's set based upon the problem as he perceives it, or are the preferences based primarily on a more fundamental personality characteristic of the client. It would also be important to determine if the same differences would be found in a study where the ultimate problem discussed by the client was the criterion rather than the problem presented in the first interview. Further research would be valuable with a sample composed of a greater proportion of clients who were seeking personal-social counseling.

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A Multi-Dimensional Approach to Self-Concept in Three Patient Groups¹

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The Jacobs Self-Attitude Scale was used to test two hypotheses: The first was that as we move from a tuberculous through a neurotic to a psychotic group of patients, we will find progressively greater extremes in choosing movement towards, against or away from other people. The second hypothesis stated that within the same groups of patients there will be a decreasing relationship between different aspects of each of these three types of social movement. All the rank differences among the three groups were in the predicted direction, certain of the differences reaching statistical significance. It was concluded that the Jacobs Self-Attitude Scale has great potential usefulness in measuring self-concept in functional, social terms rather than in the static, structural manner of most existing self-concept scales.

In a review of the research studies on self-concept, the writer, (Lowe, 1961) found certain underlying difficulties which made it difficult to assess the real significance of the current literature on self-concept. He pointed out in the review that confusion resulted in moving back and forth from philosophical to operational definitions of self. One resulting pitfall was to assume naively that self-concept can be equated with consciousness, and so can be justified by self-evidence as being a distinct psychological entity standing apart from functional experience. A second common pitfall follows from the first. As a distinct entity, the self-concept was assumed to be unidimensional. Measuring instruments were accordingly based on the assumption that there is essentially a single attitude toward self, so that views of the self would be colored by the same positive or negative degree of self-regard even

though they were from many different vantage points.

Since the review was written, a new scale has been constructed which avoids a number of the problems which have been inherent in existing scales. The Jacobs Self-Attitude Scale (Jacobs, 1961) operationally defines the self in terms of function or social movement rather than in terms of entity. The rationale of the test is that of Horney's division into social movement as being toward, against or away from others. All the items on the scale represent one of these three dimensions of social movement as described by Horney (1945). Each of these three general categories (or directions of movement) is further subdivided into two specific categories, depending upon whether the subject is classifying himself or his relations with other people. The Jacobs Self-Attitude Scale thus makes a distinction within each direction of social movement between the person who sees himself as being a certain social type and the person who sees himself as behaving towards others in terms of that same type. For example, the test allows

¹The author expresses appreciation to Durand F. Jacobs, Nicholas Figetakis, and John Lowenfeld for their help during the different stages of the study.

a person who sees himself as being competitive and self assertive (moving against others) also to choose a social orientation which permits him to withdraw and move away from other people. There is thus an inward and outward dimension to each of the three dimensions of social movement.

This study is concerned with certain aspects of the self-concept that previous self-attitude scales have not been designed to measure. First of all, the Jacobs Self-Attitude Scale provides an analysis of the degree of social imbalance since it reveals to what extremes the individual may go in neurotically stereotyping one particular type of social movement. On the Jacobs Self-Attitude Scale, such abnormal behavior is represented by an abnormally high (or low) score on any of the three types of movement. A normal person, on the other hand, would have a flat test profile, and would display what is here termed "social balance" among the three types of movement.

The first hypothesis to be tested is that as we move from a normal through a neurotic to a psychotic group of subjects, the subjects will show progressively less social balance. Defined operationally, there will be an increasing tendency to have an extreme score on one of the three types of movement described by Horney as psychopathology increases.

The second new feature of the Jacobs Self-Attitude Scale is that within each of the three Horney directions of social movement, it is possible to determine how closely one's self-concept agrees with his social attitudes. This ability to relate two somewhat similar aspects of oneself is, of course, closely related to insight. It is natural to assume that in a well-adjusted person there will be congruence or consistency between what one sees himself as being and how one behaves towards others. Thus, the individual who sees himself as self-assertive (moving against others) should also see his behavior as being critical and controlling of others (also moving against others). The degree of similarity between self-pole and other-pole within a particular type

of social movement is here termed "congruence balance."

The second hypothesis to be tested in this study is that congruency balance, or similarity of scores between attitude toward self and others within each type of social movement, will decrease as again we move from a normal through a neurotic to a psychotic patient population.

Method

Subjects. Subjects for the study were selected on a random basis from patients at both the neuropsychiatric and tuberculosis divisions of the Brecksville VA Hospital. One group consisted of 30 patients from the psychiatric division, all of whom had been independently diagnosed by their staff physician as being functionally psychotic, i.e., schizophrenic and manic depressive. A second group also consisted of 30 psychiatric patients. By contrast, these patients had been diagnosed as having a functional condition, non-psychotic in nature. The third group consisted of patients from the tuberculosis division of the hospital. These patients were from a psychiatric standpoint "normal," to the extent that none of them had been diagnosed psychiatrically within the hospital. This last group had recovered from the infectious phase of tuberculosis, having had negative sputum for at least 90 days. They had, however, been hospitalized for a median period of approximately six months.

Measuring Instrument. The 90 subjects were administered the Jacobs Self-Attitude Scale in a group setting. This scale presents in a forced choice format items which a majority of clinical judges selected as representing one of the three types of social movement, as described by Karen Horney. A Q-sort arrangement of the test items has been validated against sociometric patternings in conjunction with previous studies (Jacobs & Pearl, 1953; Pearl & Jacobs, 1955). Although the items in their present format have not been validated against external criteria, Jacobs (1961) has found that the scales have a satisfactorily high test-retest reliability.

Results

Since there were no significant differences among the three patient groups in mean and standard deviation, raw scores were converted into standard scores on the basis of the mean and standard deviation of the combined groups. (Group means and standard deviation are shown in Table 1.)

To test the hypothesis that social balance among the three directions of social movement would decrease as psychopathology increases, the sum of the most extreme scores was found for each group on both attitude towards self and attitude towards others. The t test was used to determine whether the differences on the

mean extreme scores among the three groups is statistically significant.

The results, which are shown in Table 2, indicate that all differences are in the predicted direction. Differences in regard to attitude to self were statistically significant, comparing neurotic and tuberculous patients, ($p < .05$, $t = 2.08$), and comparing psychotic and tuberculous patients ($p < .02$, $t = 2.63$), using a one-tailed t test. While the mean differences were in the hypothesized rank order for the three groups in regard to attitude to others, the differences do not reach statistical significance.

Next, a test was made to see if congruency balance (or degree of similarity

Table 1
Standard Scores of the Three Patient Groups on the Original Scales
of the Jacobs Self-Attitude Scale

	Psychotic		Neurotic		Tuberculous	
	M	SD	M	SD	M	SD
Attitude towards self						
Moving towards	50.42	10.64	52.60	9.96	46.99	6.52
Moving against	50.31	10.01	49.37	10.96	50.31	8.99
Moving away from	49.56	11.62	46.76	10.24	53.70	5.95
Attitude towards others						
Moving towards	49.61	10.45	50.61	10.44	49.79	9.04
Moving against	48.59	10.33	50.00	9.56	51.42	9.82
Moving away from	52.34	10.73	48.18	9.38	49.48	9.71

Table 2
Means, Standard Deviations and t Scores for Mean Differences for
Social Balance (Balance Among Directions of Social Movement)

	M	SD	t Scores for Mean Differences with	
			Neurotic	Tuberculous
Attitude towards self				
psychotic	13.50	6.43	.345	2.630**
neurotic	12.90	6.90		2.075*
tuberculous	9.87	3.85		
Attitude towards others				
psychotic	13.47	5.83	.645	.660
neurotic	12.40	6.82		.817
tuberculous	10.97	6.49		

*Significant at the .05 level using one-tailed t test

**Significant at the .02 level using one-tailed t test

Table 3

Means, Standard Deviations, and *t* Scores for Mean Differences for Congruency Balance (Balance Between Different Aspects of the Same Direction of Social Movement)

	M	SD	<i>t</i> Scores for Mean Differences with	
			Neurotic	Tuberculous
Movement towards others				
psychotic	8.43	6.65	.250	1.253
neurotic	8.03	5.54		1.101
tuberculous	6.40	5.68		
Movement against others				
psychotic	8.63	6.17	.050	.713
neurotic	8.57	5.94		.739
tuberculous	7.50	5.45		
Movement away from others				
psychotic	13.80	10.32	1.667*	1.961*
neurotic	9.90	7.17		.315
tuberculous	9.33	6.56		

*Significant at the .05 level, using one-tailed *t* test.

between attitude to self and attitude towards others within each of the three types of movement), would decrease in the more disturbed groups (Table 3). The sum of the mean differences in standard scores between the measures of a particular type of movement was found for each group. Again, one-tailed *t* tests were run for differences in the mean differences, comparing each group with the other two.

The rank order of the three groups was in the predicted direction on all three types of social movement. The most meaningful differences were in regard to movement away from others, comparing psychotic patients with the other two groups. These differences are significant at the .05 level using a one-tailed *t* test.

Discussion

The results provide encouragement for Karen Horney's assumption that individuals tend to exaggerate their style of social movement to the extent that they are disturbed. However, since the results achieve statistical significance only on those scales where the self is the focus of concern, they suggest that disturbances in social behavior

are secondary to more marked distortions in one's attitude towards his relations with others. These results can, of course, be interpreted as providing evidence that social behavior is determined by an internal frame of reference, and that a change in one's social style of life must be preceded by a change in the way one views his self and his social needs.

Further, it is important to note that there are no significant differences among the means on any of the scales. Apparently, there is no one direction of social movement that characterizes different types of patients to any significant extent. Psychopathology would seem to be characterized by an over-reliance upon any of the three directions of social movement.

Finally, the similarity of the means among the different groups suggests that the Jacobs Self-Attitude Scale is something other than a measure of psychopathology. A shortcoming of previous self-attitude scales is that a self-concept with a negative emotional tone seems to be a part of feelings of general unhappiness which characterize many forms of psychopathology. It has thus, on most existing scales,

been impossible to separate symptoms of psychic distress from etiological factors. Since the Jacobs Self-Attitude Scale seems able to hold level of self-regard constant for different types of patients, it seems to have great potential promise for providing clinical clues as to areas of social functioning where the individual seems most vulnerable as well as where he seems most secure.

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Comment

This short article by C. Marshall Lowe is packed with significant ideas, and demonstrates that length is hardly a prerequisite for significance in scientific articles. It is a valuable discussion in terms of its theoretical contribution to a significant area on the forefront of psychology—the self-concept. Perhaps one of the oldest of psychological concepts (the ego), it is still one of the most poorly defined and understood, and is still one of those which currently commands great interest and attention.

Early in the article Lowe makes one of his most important points, that the self-concept is not a single unidimensional entity. Actually there must be a multitude of different aspects of any one individual's self-concept. For example, a person's self-concept as a counselor might be vastly different from his self-concept as a baseball player, a parent, or a lover! It seems logically very inconsistent for so many of us all these past years to have tried to put these different elements together into a single entity. Does this not resemble trying to name a basket full of apples, toads and bricks? Their most obvious commonality would seem to be the fact that they are all in the one basket.

Lowe bases his study on Jacob's three-dimensional scale of self-concept, which in turn is based on Horney's three dimensions of acting in social relationships. I'm

not sure whether a scale of only three dimensions is really broad enough. Personality and self-concept are probably too extensive ideas to be limited in this manner. But of course three dimensions are possibly better than one, and an investigator would certainly have to stop somewhere. One is a bit torn between considering a finite number of dimensions, or turning to a matrix of a multitude of potential variables. But the latter approach obviously suggests immediately that a factor analysis should be performed, which leads right back to the manageable group of discriminate traits or characteristics, and not just a pot-pourri of any old variables.

Possibly Horney's approach is too simple a way of analyzing the concept of self-concept. I would prefer the approach which Thurstone or Cattell would have used. Horney's classification reminds me of the scholastic's table of the elements—"earth, air, fire and water"; i.e., reasonably accurate, but limited by the tools of observation available at that time. Fortunately Jacobs did manage to double the number of cells in the classification by introducing a new dimension of categories, intrapsychic vs. interpersonal, thus increasing the cells to six, which more than doubles the value of the scheme. But I'm not sure that Horney's dimensions and the latter continuum are fully orthogonal in their relationship; there seems to me to

be an overlap. (Lowe is confusing, also, when he speaks of Horney's three dimensions, and then adds a new "dimension" as indicated above. If the new one is a dimension, then the Horney classifications ought to be considered only points on a dimension, ought they not?)

I consider Lowe's conclusions profoundly important, however. That the atypical individuals are the ones who exaggerate their style of social movement to the extent that they are disturbed is significant, and the corollary idea is even more so: there is no one direction of social movement that characterizes different types of patients. The idea that psychopathology is characterized by an over-reliance upon *any* of the three directions of social movement shakes some of our most deeply ingrained clichés about the nature of the psychosis, and the construct labelled "the schizophrenic process." Maybe we ought to abandon that construct, and speak of the maladjustive process.

I do have a little quarrel to pick with Lowe. Two, in fact! First, is his reliance on psychiatric diagnoses of the functionally psychotic groupings. Too many studies (Ash, *et al.*) have shown such classifications to be so unreliable that they are virtually meaningless! We ought to stop using them, and stick to more operational

definitions. Incidentally, Lowe makes a case for using operational definitions of concepts in psychology (particularly the self-concept) and I think his point is very well taken. I can't see how any other definitions have any precision at all. But why didn't Lowe use something like the Hospital Adjustment Scale with a *group* of raters of behavior? Fortunately he was only distinguishing between the functionally psychotic, the functionally not-so-psychotic, and the sputum-negative ex-tubercular; physicians are probably fairly accurate at discriminating between the first two, and lab technicians are highly accurate with the second two.

My second quarrel, and it is a little one, is over the matter of whether a sputum-free ex-tubercular population is really a good control group. Might it not include some "ambulatory psychotics"? But Lowe is to be commended on his use of *two* control groups, really, and who is to suggest a better one than the tuberculous group? Certainly I don't recommend using hospital attendants or college sophomores. And visitors of mental patients might be potentially psychotic themselves. But what about using a plain garden-variety man-on-the-street control group sometime!

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Questionnaire Returns

Because copy for this issue goes to the printer soon after the Summer issue appeared, many questionnaires are still being received as this is written. The number returned is excellent and many have additional helpful comments. We hope to have the returns tabulated and a report made in the Winter issue. Your help with this inquiry is much appreciated.

Ego Strength and Beliefs About the Cause of Illness

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Level of maturity of beliefs about the cause of illness was hypothesized to be positively related to ego strength among 47 men afflicted with Parkinson's disease. The causal beliefs were inferred from an interview and their maturity was defined according to their correspondence with medical explanations. The Ego Disjunction scale, the Worcester Scale of Social Attainment and Barron's Ego Strength scale were used to assess ego strength. The hypothesis was borne out among the scores on the ego disjunction measure. While a significant positive relationship was also found between social attainment and belief maturity, the importance of education in social attainment imposed a restriction on the hypothesis as tested by this measure. Scores on the Barron's scale provided no support for the hypothesis. Education and religion were also found to affect causal beliefs. Belief maturity was discussed in terms of freedom from intrapsychic conflict.

Beliefs about the cause of illness among primitive societies have long been known to be magical and unrealistic. Whiting and Child (1953) found that differences among cultures in such beliefs reflect guilt and anxiety about specific behavior systems (e.g. oral, dependency, etc.). The purpose of the present study was to examine whether beliefs concerning illness also differ among individuals within American society and, if so, to determine what personality characteristics are relevant to such beliefs.

Although the presence and wide diffusion of medical knowledge in America probably restricts the variety of beliefs about illness, it is nevertheless possible that the same scientific knowledge expounded can be differently perceived and assimilated by individuals. In our society some in-

dividual causal beliefs about illness may accord with scientific conceptions. Others may resemble personified explanations found in primitive cultures and in children in our society. Beliefs were accordingly categorized as mature and immature according to their degree of correspondence with medical explanations (Werner, 1957). Following the work of Smith, *et al.* (1956) it was assumed that access to, and communication of, information about illness were the same for all individuals.

Beliefs in the present study were examined in relation to ego processes. The reason for this stems from the conception of a belief as a symbolization of a relationship between events and the fact that symbolization is commonly explicated in terms of the ego (Dollard & Miller, 1950). Accordingly, the hypothesis to be tested was that level of maturity of beliefs about the cause of illness is positively related to ego strength.

Method

The test of the hypothesis involved the comparison of maturity of beliefs, expressed

¹This article is based upon a doctoral dissertation submitted to Teachers College, Columbia University. Grateful acknowledgment is extended to Edward J. Shoben, Jr., Donald E. Super, and Leonard Diller for their helpful suggestions.

Drs. Robert S. Schwab and Albert C. England, Jr., of Mass. General Hospital, and Dr. Irving S. Cooper, St. Barnabas Hospital, New York City, were instrumental in providing subjects.

by a group of physically-ill men, with three measures of ego strength.

Causal Belief

A semi-structured, open-end interview was used to infer the belief. The preliminary questions were: What is your illness? How long have you had it? Can you tell me how it began? The lead question was then asked: What do you think caused it? The interview was recorded by hand and subsequently reproduced.

Two judges independently read the entire belief interview and ascertained the level of maturity according to the following two level scale: I. *Mature*—Accurate medical explanation; a relatively full account of the cause that is specific and/or detailed, which accords with medical factors. II. *Immature*—Inaccurate medical explanation; does not accord with correct medical explanations and evidences little awareness or grasp of medical factors. Judges agreed on the maturity level in 38 out of the 47 beliefs (81%), and subsequently made pooled decisions on the remainder.

One example of a mature belief was the statement of a plumber:

According to the doctor I went to, it is high temperature, high fever. When I was two years old I had one. My parents told me I did. I asked the doctor if it could be from something that far back and he said yes.

An example of an immature causal belief can be seen in the statement of a mechanic:

Maybe nerves. I led a clean life. Why should I have this happen? I was always a good church member. I'm the worrisome type. That's what brings it on. I used to blow my top and worry too much. It puts a strain on your brain.

Ego Strength

The measures used to assess ego strength were: Ego Disjunction scale (ED), Worcester Scale of Social Attainment (WSSA), and Barron's Ego Strength scale (*Es*).

ED is a modified form (120 items) of the Edwards Personal Preference Schedule consisting of four pairs of needs which appear to be mutually incompatible: aggression—deference, succorance—nurturance,

autonomy—abasement, order—change. ED is defined as the occurrence in the individual of two or more relatively strong needs with mutually incompatible objectives, and represents a type of intrapsychic conflict which disrupts ego functions. It is scored by summing the degree of disjunction for each indicator pair (Trehub, 1959). ED has been related to degree of psychopathology (Trehub, 1959).

The WSSA is a self-reported biographical questionnaire comprising broad areas of social accomplishment: occupation and education, sex and marriage, and social relationships. It indicates the extent to which an individual has met the role expectations of a responsible adult male in modern American society (Phillips & Cowitz, 1953). The WSSA has been found to relate to performance under stress (Feffer & Phillips, 1953), to developmental level of perceptual functioning (Lane, 1955) and to ego strength and reality testing (Seidel, 1960).

The *Es* consists of 68 items derived empirically from the MMPI on the basis of items which distinguished patients who benefited from psychotherapy from those who did not (Barron, 1953). From correlations with other assessment measures in additional patient and normal samples, Barron considers the scale to be a measure of ego strength, because it includes such characteristics as: strong sense of reality, feelings of adequacy, emotional spontaneity and outgoingness.

Subjects

The Ss were 47 white men afflicted with Parkinson's disease which is a severely disabling illness of the central nervous system. Medical authorities claim that the major cause of Parkinson's disease is encephalitis (Doshay, 1960). In a small proportion of Parkinson's patients, the disease is attributed to arteriosclerosis, or, when a high fever is not discerned from the medical history, to "unknown factors." At the time of the investigation widespread sources of information concerning this disease were available from newspapers, popular magazines and television. All of the Ss

were previously aware of the name of their illness. Most of them attended regularly a "Parkinson clinic," which afforded them an opportunity to discuss their illness with other individuals who were similarly afflicted.

Patients who were arteriosclerotic or evidenced signs of organicity were excluded from the sample. Twenty-three of the men were tested in a New York City hospital a day or two before undergoing an operation to alleviate their Parkinson symptoms. An additional 24 men who were not under these conditions were drawn from other hospitals in New York City and Boston. A preliminary examination of the patterning of the two groups on the test variables justified combining the men for test of the hypothesis.

Demographic Characteristics

The men ranged in age from 34 to 63 years with a mean of 52.1 years for the entire group. Intelligence was measured by a multiple choice vocabulary test (Thorndike, 1942). Socioeconomic status was estimated by Hamburger's Occupational Rating Scale (Hamburger, 1957) which uses the S's occupation as an index of social class. The occupations ranged from a rating of 7 (low) to a rating of 1 (high). The mean rating obtained for the Ss was 4.2. The median rating of 5 and the distribution of the ratings indicated a predominance of lower status Ss. Level of education ranged from fifth grade to graduate study, and mean educational level was "some high school." Seventeen men were Protestants, 16 were Catholics and 14 were Jewish.

Administration

All tests were given individually by the investigator in one or two consecutive days. The order of administration was: WSSA, belief interview, *Es*, vocabulary, and ED.

Results

Hotelling's T^2 test (Anderson, 1958) was used to test the significance of the differences between immature and mature belief groups with regard to the three measures of ego strength. T^2 was derived by computing a function of the pooled differences of means, variances and cross-products between the two belief groups on the three ego strength measures. The T^2 was converted into an F ratio and referred to the F distribution for the test of significance. Results of the T^2 , shown in Table 1, were significant at the .01 level.

Individual t tests for each of three measures revealed that the differences between means of the WSSA scores and the ED scores were significant. In the case of *Es*, however, the difference was not significant. (WSSA $t = 3.2$, $p < .005$; ED $t = 2.72$, $p < .005$; *Es* $t = 1.5$; $p < .10$). The intercorrelations in Table 2 further indicated that the *Es* did not conform to the patterns revealed by the other two tests. *Es* was therefore omitted in all subsequent analysis.

Effect of Social Status and Education

Table 2 revealed that social status, as measured by occupational level, and educational level were correlated with both ego strength and belief maturity. It is important to note that both occupational level and educational level are integral compo-

Table 1

T^2 Test Comparing Immature and Mature Belief Groups on Ego Strength Measures

Coefficient of Variable						
Social	<i>Es</i>	Ego	T^2	<i>df</i>	<i>F</i>	<i>p</i>
Attainment		Disjunction				
-.035	-.037	.064	17.75	3.43	5.64	.01

Table 2
Intercorrelations of Major Variables (N=47)

	Ego Strength			Vocab.	Social Status	Education
	Social Attainment	Es	Ego Disjunction			
Social Attainment						
Es	.23					
Ego Disjunction	-.42	-.16				
Vocabulary	.52	.49	-.32			
Social Status ^a	-.83 (-.67) ^b	-.26	.34	-.41		
Education	.72 (.66) ^c	.39	-.28	.60	-.74	
Belief Maturity ^d	.43	.21	-.46	.25	-.32	.47

Note—A correlation coefficient of .29 is significant at the .05 level, two-tailed test.

^aNumerically high ratings indicate low social status.

^bCorrelation of WSSA minus educ. component vs. educ.

^cCorrelation of WSSA minus job level component vs. social status.

^dPoint biserial correlations were computed.

nents of the WSSA. The partial correlations shown in Table 3, indicate that when occupational and educational level are held constant, the relationship between belief maturity and ED was significant. In the case of the WSSA, the expected relationship similarly remained significant when holding occupational level constant, but not when holding educational level constant. Multiple partial correlation (not presented here) revealed that ED and education independently reduce the unexplained variance in maturity of beliefs, but the WSSA does not. In view of the high relation between WSSA and education in Table 2, this is not surprising. The importance of education in social attainment imposed a restriction upon the acceptance of the hypothesis as tested by the WSSA. It seems clear that "ego strength" is a complex variable consisting of education as one major

component and relative freedom from intrapsychic conflict as another.

Effect of Intelligence

The possibility exists that the obtained relationship between ego strength and belief maturity is also a function of intelligence, since vocabulary correlated with the ego strength measures. In holding intelligence constant (Table 3), however, the expected relationship is still evident.

Effect of Religion

Fisher exact probabilities were computed between religious affiliation and belief maturity, subsequent to a gross matching of the religious groups for occupational level. Among upper and middle status men, Protestants had a significantly ($p = .05$) greater proportion of mature beliefs than did Jewish and Catholic men. Among men of

Table 3
Simple and Partial Correlations Between Ego Strength and Belief Maturity

	Belief Maturity			
	Point Biserial	social status constant	education constant	vocabulary constant
Social Attainment	.43	.31 ^a	.14 ^b	.36
Ego Disjunction	-.46	-.39	-.39	-.41

Note—A correlation coefficient of .24 is significant at the .05 level, one-tailed test.

^aPartial was computed with job level component of WSSA deleted.

^bPartial was computed with educ. level component of WSSA deleted.

lower status, no religious differences were evident. It thus appears that religion is a possible socializing agent which affects individual attitudes.

Effect of Information

It is also conceivable that physicians vary from one another in their honesty or directness and thus communicate different information to their patients. An examination of the Ss beliefs classified according to their physicians did not reveal systematic differences. This would suggest that the information given by individual physicians did not color the stated beliefs of their patients. Some of the immature belief statements reflected an awareness of the scientific causal explanation in their inclusion of the pertinent medical factors. Such factors were overshadowed, however, by the individuals' focusing upon their own, more personalized explanations. For example, one patient stated: "My doctor says it's due to a high fever but I think it's hereditary." This patient even discounted a spontaneously recalled incident of fever.

Discussion

The positive relationship between ego disjunction and the expression of causal beliefs, which are congruent with medical explanations, may be viewed as conflict-free exercise of ego functions. This implies that men who are sufficiently free from intrapsychic conflict are able to contemplate their illness fully and to recognize pertinent factors which are independent of their own personal conflicts and needs. Low internal conflict thus seems to be a central component of the conditions facilitating a realistic perception of environmental factors.

Since illness is an important life condition in our society, as well as in primitive cultures, it is a topic of social significance in and of itself. Knowledge of beliefs about the cause of illness may have practical implications in dealing with patients. The belief that illness has a non-medical etiology may affect a patient's emotional reaction to illness, recuperative potential, and attitudes toward medical treatment. The de-

velopmental level of illness beliefs may also indicate characteristic maturity of other behavior.

It would be of interest to examine antecedent child training practices pertinent to adult causal explanations. Extended study of the specific ego functions which come into play in forming illness beliefs is also needed. Finally, the relation of education and religious affiliation to ego processes and belief maturity warrants further inquiry. The present study demonstrates the usefulness of the application of cross-cultural research to individual differences within our society.

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Relationship of Values to the Perception of Activities Involved in an Occupation

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Values and the psychological work environment as perceived by the individual are measured and investigated in relationship to occupational choice. An instrument was developed for measuring the perceptions of behaviors in the form of specific activities or tasks that a subject judges as typical of his chosen occupation. The Poe Inventory of Values was used to measure values in eight value areas. Subjects were 79 male freshmen in teacher education and 321 engineering freshmen at the University of Nebraska. Values were associated with the differing perceptions of engineering by prospective engineers but this was not found for freshmen teachers' perceptions of their chosen field.

This study examines the possible relationships between values of college students and their perceptions of their chosen occupational role. Evidence that values operate to influence behavior and perceptions of a variety of objects has been documented by a number of authors (Sherif and Cantril, 1947; Murphy, 1947; Allport, 1955). It seems reasonable to assume that the same may be true for perceptions of activities performed by a worker as a part of his occupational role. It is possible that the relatively naive college freshman projects his values into the occupational role he has chosen and thus organizes the activities and tasks of his perceived role in such a fashion as to be harmonious with his values. This writer hypothesized that an individual's values are related to the activities or tasks (representing behaviors) that he judges as typically performed within his chosen occupational role.

Method

Sample

All of the male freshmen enrolled in engineering ($N = 321$) and in education ($N = 79$) at the University of Nebraska in the fall of 1961 were tested. For purposes of this study transfer students were not included.

Instruments Used

Measure of Values. The Poe Inventory of Values (PIV) (Poe, 1954) was used to measure personal values in eight areas: *Intellectual, aesthetic, religious, humanitarian, social contact, power, prestige and material.* Using a test of homogeneity, Poe found that each of the eight value areas measures significantly different behavior with respect to each of the other areas. Reliability coefficients ranging from .84 to .93 resulted for the various value areas (Poe, 1954).

Subjects respond to the PIV on a five point scale in terms of agreement or disagreement to propositions designated as value objects, conditions, and modes of behavior. Over 70 per cent of the items are self-referents, "I am known as a good mixer

¹Based upon a doctoral dissertation submitted to the University of Nebraska in 1962. The author is indebted to Warren R. Baller, who directed the study, and to C. d'A. Gerken and colleagues in the University Counseling Service for their constructive criticism and encouragement.

socially." Other items express opinions and views of life such as, "The success of a civilization can best be measured by its material achievements—Working for the welfare of others is the highest aim of mankind—The most important part of the newspaper is the editorial section."

The inventory is not an ipsative scale. The scores provide a measure of value intensity as well as normative interpretation. The advantages of this type of measurement have been discussed elsewhere (Bauernfeind, 1962).

Measure of Occupational Role Perceptions. A conceptual scheme for "orientations-toward-work" was developed in order to categorize the student's perceptions of his chosen occupation. The findings and suggestions of other researchers (Holland, 1959; Gerken, 1949; Ginzberg, 1951; Super, 1953; Stern, 1958; Gonyea, 1961) led this writer to formulate five areas of orientations-toward-work activities. The five orientations which comprise the conceptual scheme for the Occupational Role Perceptions Inventory (ORPI) (Olive, 1962) are:

Scientific-intellectual orientation—Activities in this orientation are concerned with developing and/or investigating scientific theories, discovering relationships, reading articles which report scientific experiments, and dealing with abstractions. People who are identified with this group choose to work out solutions to problems, to test theories in scientific experiments, deal with abstractions, and to evolve a philosophy or theory.

Aesthetic self-expression orientation—Activities of this area include dealing with environmental problems in an artistic and/or literary way. Verbal expression activities are characteristic of people who wish to improve their verbal skills, who choose to write and speak as a means of expression. Artistic activities are characteristic of people who choose to design, decorate, observe the artistic work of others, and prepare the environment to appear pleasing.

Nonhierarchical people-orientation—Activities of this orientation are based on the desire to socialize with others as equals, to understand others and help

others. People who are identified with this group choose to help others with their problems and to be sympathetic and helpful to the less fortunate.

Hierarchical people-orientation—This area includes activities which give the individual a position of leadership, status, and/or dominance over others. Activities of this orientation are chosen by people who like to appear before groups and to be placed in a position to make decisions for others, and use their verbal skills to convince others. People who are identified with this group seek office and choose to act as a leader or the chairman of committees.

Material orientation—Activities of this orientation include investing, handling money and actuarial tasks. Persons of this group choose to read about finances and keep records and detailed accounts of spending.

Specific behaviors in the form of tasks or activities which, with reason, might be performed within any number of occupations made up the items within each orientation-toward-work areas. These behavior descriptions were chosen from (1) items which had been used in a previous unpublished inventory of work activities which included descriptive phrases collected and revised from the Dictionary of Occupational Titles by Gerken (1949); (2) other items were added that seemed to the researcher to be activities which might be appropriate within several occupations. Some of the items were derived from existing inventories.

From a collection of 279 items, three counseling psychologists and the researcher sorted the items with the following objectives: (1) elimination of items which might elicit a response because the behavior described could be deemed by the subject as socially desirable, (2) retention of items ambiguous enough to allow projection, and (3) retention of activities appropriate within any number of occupations. Of the 279 items, 127 were retained and presented to eight judges with directions to sort the activities into the category judged as most appropriate for the described behavior. Any activity which was judged to contribute

equally to more than one category was eliminated. The judges (four counseling psychologists and four doctoral candidates in psychology or educational psychology) sorted 110 items with a least 62.5% agreement as belonging to one and only one orientation-toward-work area.

In completing the ORPI the subject describes his perception of behaviors in the form of tasks or activities which he considers typical or not typical of his chosen occupational role. For instance, one student might see one or all of these: "Determine people's needs—Help people solve problems—Make out a budget"—as behaviors typical of engineers while another might not see the pertinence of these to engineering.

Analysis of the Data

The hypothesized relationship between values and perceptions of the chosen occupational role was tested by obtaining all possible correlations for scores from each of the eight value areas on the PIV compared with each of the five orientations-toward-work areas on the ORPI. The hypothesis was first tested using scores from the inventories of 321 freshmen engineers and repeated for the sample of 79 freshmen teachers.

The Wilcoxon matched-pairs signed-ranks test as presented by Siegel (1956, pp. 75-83) was utilized to compare the correlation matrix of engineers with teach-

ers. This test made it possible to use information about the direction of differences within pairs of correlations as well as the relative magnitude of differences.

Results and Discussion

The correlations obtained for each of the eight values measured by the PIV compared with each of the five areas of orientations-toward-work activities measured by the ORPI are reported in Table 1.

Significant positive relationships were found for 31 of the 40 correlation coefficients. *Intellectual*, *power* and *humanitarian* value areas were significantly related at the 1 per cent level to all areas of orientations-toward-work activities perceived as typically performed by engineers. These values represent extremes of the intensity scale with *intellectual* value ranking at the high end of the scale and *humanitarian* low. It cannot be concluded from the correlation analysis that values are necessarily the influencing factor in directing the prospective engineer's perceptions of his chosen occupational role. It does indicate, however, that values are associated with differing perceptions of a single occupational role and knowledge of a student's values reduces the unpredictability of his perceptions of the chosen occupational role of engineering.

It is interesting to note that of the nine correlations which are not significant, seven of them are within the *social contact* and

Table 1
Correlations between Values and Perceptions
of Engineering for 321 Engineers

Poe Inventory of Values	Scientific- Intellectual	Occupational Role Perceptions Inventory			
		Self- Expression	Nonhierarchical Orientation	Hierarchical Orientation	Material Orientation
Intellectual	.35**	.12*	.18**	.26**	.21**
Aesthetic	.09	.16**	.20**	.17**	.16**
Religious	.18**	.14*	.13*	.17**	.12*
Humanitarian	.24**	.23**	.28**	.27**	.24**
Social Contact	.13*	.10	.09	.05	.08
Power	.20**	.17**	.24**	.29**	.29**
Prestige	.18**	.20**	.10	.12*	.16**
Material	.18**	.08	.06	.04	.17**

*Significant at the 5% level of confidence (.110)

**Significant at the 1% level of confidence (.144)

Table 2
Correlations between Values and Perceptions
of Teaching for 79 Teachers

Poe Inventory of Values	Scientific- Intellectual	Occupational Role Perceptions Inventory			
		Self- Expression	Nonhierarchical Orientation	Hierarchical Orientation	Material Orientation
Intellectual	.29**	.18	.04	.06	-.08
Aesthetic	-.07	.19	-.09	-.08	.04
Religious	.04	.02	.05	-.07	-.07
Humanitarian	.13	.11	.21	.02	-.23*
Social Contact	.02	.06	.08	.07	.03
Power	.09	.24*	.22*	.22	-.01
Prestige	-.13	.13	.00	.07	.19
Material	-.16	.08	-.09	.09	.27*

*Significant at the 5% level of confidence (.221)

**Significant at the 1% level of confidence (.288)

material value areas. This may be a function of the instrument. These areas may be more difficult to measure with items which are neutral in terms of social desirability within the college atmosphere.

It was observed from the data that the student who is certain of his choice ($N=63$) has a significantly lower *material* value than the subject who states he is indefinite ($N=90$) of his choice of engineering. It could be that the subject who has a high *material* value finds the stereotype of engineering attractive but upon entering the program is disillusioned and considers changing to another field.

In testing the hypothesized relationship between values and perceptions of the chosen occupational role of teaching using the sample of 79 teachers, only 5 of the 40 resulting correlations were found to be significant. The hypothesized relationship is not supported from the results; 2 or 3 correlations in a matrix of 40 correlations could be significantly related by chance.

The value area, *Power*, was the only one that was related to more than one orientation-toward-work area. It was related to both the nonhierarchical people-orientation and aesthetic self-expression orientation. The correlation between *intellectual* value and the perception of teaching as scientific-intellectual oriented was the only correlation statistically significant at the 1 per

cent level of confidence. If the prospective teacher has a high *humanitarian* value, teaching is perceived as including few activities of material orientation.

When mean value scores are compared for the two samples using the *t* test, three value areas differentiate the occupational groups. Teachers have significantly higher *humanitarian* and *aesthetic* values and engineers have a significantly higher *material* value.

The Wilcoxon matched-pairs signed-ranks test was computed to determine whether the marked differences in the correlations for the two samples was a difference in the relationship of values compared with perceptions of the chosen occupational role or might result from the difference in size of samples. The resulting probability was 1 in 10,000 that the difference could have occurred as a result of the sample sizes. Thus, freshmen who have chosen engineering do perceive the role of engineers in relation to their pattern of values while male students who choose teaching have very little relation between their values and their perceptions of the role of teaching.

It may be inferred that male students choosing teaching as an occupation are quite aware of the activities performed within that occupational role. Therefore, in judging activities as being typical of male teachers this group does not project

their values into the role. An alternative inference is that men choose teaching because of factors related to environmental circumstances rather than values.

Kuhlen and Dipboye (1958) reported that male teachers had been forced to compromise their ideal goal for an attainable one. In line with their report, it might be conjectured that men choosing fields of study in teachers college may plan ultimately to enter such areas as sales, management or personnel work. A teaching certificate for some may offer insurance that they will have a job even though they may intend eventually to pursue occupations other than teaching.

Generalizations

Generalizations from this investigation are limited by the use of samples from only two fields of study. Since the results of the hypothesized relationships between values and occupational role perceptions were found so diverse for the two groups, the writer is led to hypothesize factors which might be different for these groups. These samples may represent extremes of the continuum with regard to possession of occupational information about their chosen roles. If this is so, then there is support for the conjecture that the more obscure and indistinct the activities of an occupation, the more the individual tends to project his values into the job descriptions. Another hypothesis is that teaching may be chosen by the more conservative individual who wants to be certain of a job and who does not wish to venture into an area about which he feels uninformed.

The instruments used in this research need to be refined but they represent an attempt to investigate key variables. A bet-

ter understanding of values and the psychological work environment as perceived by the individual might help to develop a workable theory of occupational development and choice.

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A Factor Analysis of the Occupational Choice Motives of Counselors

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A factor analysis of the responses of 153 graduate students in guidance and counseling to 60 Likert-type items listing possible reasons for entering the profession yielded 18 rotated factors. Ten of the factors reflect adient aspects of the profession; 5 factors reflect aversive elements avoidable through the profession; and 3 reflect socially-acceptable "intraverbal" reasons.

Several factor analytic studies of vocational motivation and morale have been conducted. These studies have sought to isolate conceptual dimensions or to develop measuring scales applicable to the full range of occupations. Marjorie Hammond (1956) identified and refined four scales of vocational motivation at the college freshman level. The scales are designated Materialistic, Competitive, Technical and Humanitarian. Astin (1958) focused his attention on work-satisfaction in a study which also yielded four scales: Managerial-Aggressive, Status-Need, Organization-Need and Working Conditions. Bendig and Stillman (1958) focused on job incentives to develop three factorially based scales labeled Achievement-Need, Intrinsic Job Interest and Job Autonomy.

Recognizing the overlapping nature of these studies, Crites (1961) factor analyzed the 11 variables included in Hammond's Occupational Attitude Rating Scales (OARS), Astin's Work Satisfaction Questionnaire (WSQ), and Bendig and Stillman's Job Incentive Rankings (JIR). This analysis yielded five factors: Material Security vs Job Freedom, Personal Status vs Social Service, Social Approval, System and Structure.

The present analysis differs from previous studies in two ways. Rather than utilizing a cross-section of subjects hold-

ing heterogeneous vocational objectives, the present study analyzes the responses of subjects enrolled in training for a single occupation, guidance and counseling. Secondly, rather than analyzing a sample of subscale scores or the items within a given subscale, this study analyzes a comprehensive set of individual self-report statements, with each statement treated as a one-item test. The study thus represents an extension of previous factor analyses of vocational motivation by focusing on the factorial structure of specific reasons for entering a single occupation.

Method

An inventory of 60 Likert-type items was prepared based on the free-responses supplied by 30 members of the 1962 NDEA Guidance Institute at Arizona State University who were asked to "list all your reasons for choosing a career in counseling and guidance." The 60 statements in the inventory included all the identifiably different reasons listed.

The sample used for the factor analysis consisted of 153 graduate students enrolled at Arizona State University and the University of Arizona during a three semester period ending in the spring of 1963. Although the students were at various stages of graduate training, most were enrolled in masters degree programs. The majority

of the students sampled had prior work experience in education. Only those individuals who reported that they were preparing for a career in some phase of professional counseling were included in the sample.

The inventories were administered in the classroom context by the regular instructors using standard directions which were also printed on the cover of the booklet. The instructions directed the students to rate each statement on a 5-point continuum extending from agreement to disagreement that the statement "is one of your reasons for choosing your profession."

Item responses were coded 1 to 5 and punched into IBM cards. A product-moment intercorrelation matrix was prepared and a principal components analysis was performed. Components with eigenvalues greater than unity were rotated to simple structure using normalized Varimax procedures. All statistical computations were performed using an IBM 7090 computer.¹

Results

Inspection of the means and standard deviations² of the variables indicates the

¹We wish to thank Western Data Processing Center, University of California, Los Angeles, for providing the computer service.

statements sampled a wide range of motives in terms of social desirability and variability. As would be anticipated with single-item variables, the intercorrelations tend to be low. Although an occasional coefficient is in the .50-.80 range, the large majority are between .00 and .40 with a positively skewed distribution. The correlations are predominately positive although a few negatives are included in the matrix.

Table 1 presents the statements with rotated loadings greater than .30 on each of the factors. It will be noticed that the analysis yielded 18 rotated factors. This number is appreciably greater than that obtained in previous studies using multiple-item variables. However, inspection of the factor pattern indicates that the rotation criterion of simple structure has been met quite acceptably. The percentage of common factor variance (h^2) is shown for each factor beside the verbal label. Factors 1 and 3 appear to be the dominant factors in terms of variance contributed to the

²A table of intercorrelations, means and standard deviations has been deposited with ADI Auxiliary Publications Project. Order document number 7868 from Chief, Photoduplication Service, Library of Congress, Washington 25, D.C., remitting \$1.25 for photoprints, or \$1.25 for 35 mm. microfilm.

Table 1
Summary of Factor Pattern

Item No.	Loading	Item
Factor 1: Status-Prestige (16% of h^2)		
53	.76	I think the work makes me feel important.
42	.76	I want to be admired.
49	.75	I want the prestige a college degree will give me.
59	.72	I like the attention I'll get.
24	.72	I want to gain prestige.
51	.65	I won't have someone bossing me.
52	.60	I'll have security.
18	.60	I want to be respected.
28	.50	I want an advanced degree.
4	.51	I like being the boss.
31	.49	I like being a nice guy.
33	.44	I like all the vacations.
32	.43	I will be able to live anywhere I please.
38	.41	I want everyone to like me.
11	.38	I want to make a good living.
6	.36	I like to talk.
43	.33	I can use what I learn in my daily life.

Factor 2: Interpersonal-Directive (4% of h^2)

27	.74	I like to organize and administer programs.
40	.39	I want to help young people become better citizens.
8	.38	I think there are opportunities for good jobs.
7	.36	I love young people.
13	.31	I want to guide young people.
46	.30	I have the background to help children.

Factor 3: Altruism-Social Service (12% of h^2)

54	.68	I want to serve my fellow man.
23	.67	I want to help people help themselves.
12	.64	I'm interested in peoples' problems.
7	.59	I love young people.
35	.57	I get personal satisfaction from the work.
50	.55	I like to listen to peoples' problems.
48	.55	I'm filling a great need.
13	.55	I want to guide young people.
20	.46	I can help minority group members.
47	.40	I think the work is very important.
40	.38	I want to help young people become better citizens.
17	.32	I think the work is interesting.

Factor 4: Global Appeal-Human Behavior (5% of h^2)

19	.83	I'm interested in human behavior.
30	.55	I think the work is challenging.
41	-.34	I think this is the work I was destined to do.
12	.34	I'm interested in peoples' problems.
34	.33	I'm interested in analyzing behavior.

Factor 5: Avoidance-Personal Threat (5% of h^2)

57	.75	I don't have the confidence to do most other types of work.
60	.64	I'm too shy to work with adults.
47	-.47	I think the work is very important.
55	.39	I want to get out of another kind of work.
46	-.37	I have the background to help children.
52	.34	I'll have security.

Factor 6: Avoidance-Business World (5% of h^2)

9	.83	I don't like the business world.
22	.46	I think the work is easy.
6	.36	I like to talk.
31	.33	I like being a nice guy.

Factor 7: Research (4% of h^2)

10	.85	I hope to do research.
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Factor 8: Instrumental Utility (5% of h^2)

39	.70	I think the work will help me in another kind of work.
43	.59	I can use what I learn in my daily life.
29	.37	I can learn to understand myself better doing this work.
28	.36	I want an advanced degree.
8	.31	I think there are opportunities for good jobs.

Factor 9: Global Appeal-Working Conditions (5% of h^2)

56	.59	I like the working conditions.
34	.57	I'm interested in analyzing behavior.
55	.47	I want to get out of another kind of work.
41	.39	I think this is the work I was destined to do.
35	.30	I get personal satisfaction from the work.

Factor 10: Avoidance-Physical Labor (6% of h^2)

5	.70	I won't have to work hard physically.
1	.65	I want to get a job that isn't routine.
6	.56	I like to talk.
11	.39	I want to make a good living.
33	.38	I like all the vacations.
32	.31	I like being a nice guy.

Factor 11: Listen and Learn (5% of h^2)		
44	.77	I'm a very patient person.
29	.41	I can learn to understand myself better doing this work.
21	.38	I want to give children the help I didn't get.
43	.34	I can use what I learn in my daily life.
3	.34	I want to give people help with vocational planning.
Factor 12: Avoidance-Competition (4% of h^2)		
37	.77	I don't like to compete.
32	.42	I will be able to live anywhere I please.
25	.42	I like to work with people with similar interests.
Factor 13: Extension of Personal Influence (5% of h^2)		
26	.73	I think older persons can influence a younger person wisely.
36	.53	I believe it fits in with my religious interests.
45	.53	I believe this is the work I can do best.
40	.35	I want to help young people become better citizens.
46	.34	I have the background to help children.
Factor 14: Attaining Acceptance and Support (5% of h^2)		
14	.66	I like working in a place where everyone is polite.
38	.64	I want everyone to like me.
31	.49	I like being a nice guy.
18	.47	I want to be respected.
15	.46	I like to know how I'm supposed to behave.
41	.31	I think this is the work I was destined to do.
Factor 15: Global Appeal-Interesting Work (4% of h^2)		
17	.61	I think the work is interesting.
3	-.45	I want to give people help in vocational planning.
25	.37	I like to work with people with similar interests.
Factor 16: Opportunity for Creativity (4% of h^2)		
2	.75	I think it will help me satisfy a creative need.
30	.47	I think the work is challenging.
46	.39	I have the background to help children.
Factor 17: School-Related Incentives (3% of h^2)		
16	.65	I liked school.
33	.31	I like all the vacations.
20	.30	I can help minority group members.
Factor 18: Avoidance-Health Threat (4% of h^2)		
58	.76	My health won't allow me to do other kinds of work.
8	-.47	I think there are opportunities for good jobs.
11	-.32	I want to make a good living.

common factor structure. Together they account for 28% of h^2 . The remaining 72% is distributed quite evenly among the other 16 factors. Each factor contributes at least 3% to the communality, and each has at least one variable with a loading exceeding .55. Nevertheless, 6 of the factors have 3 or fewer variables with loadings above .30, which makes their interpretation necessarily quite tentative.

Inspection of the factor pattern reveals that the factors can be arranged under three general headings: adient, abient and global appeal. Ten of the factors are adient, reflecting positive purposive aspects of the

guidance and counseling profession. These include a search for personal status and prestige (1), a means of directing others (2) and helping others (3), an opportunity to do research (7), a ladder to further success (8), possibility of listening to others and learning about oneself (11), a way of extending one's personal influence (13), a means of attaining personal acceptance and support (14), an opportunity to be creative (16) and a way of maintaining school relationships (17).

Five of the factors are abient, reflecting the avoidance of various aversive elements through the guidance and counsel-

ing profession. These include the avoidance of personal threat (5), the business world (6), physical labor (10), competition (12) and health threat (18).

A final triad of factors focuses on socially acceptable, stereotyped and "intra-verbal" reasons for entering the profession. These three factors (4, 9, 15) are each designated as "Global Appeal" factors in Table 1, with appended sub-labels of human behavior, working conditions and interesting work.

Discussion

One can only speculate concerning the determinants of the multiplicity of factors obtained in this study compared with the small number of factors yielded by previous studies. The larger number of variables included in the present study provided an opportunity for a more extensive factor structure to exhibit itself. The 5 factors from 11 variables found in Crites' (1961) study, for example, push the limits of factorial complexity. On the other hand, the number of variables *per se* is not a determinant of a factor structure. It would certainly have been possible for the 60 variables to fall into Crites' 5-dimensional pattern.

Although on a different level of specificity, the factors yielded by this study do appear to have at least a qualitative relationship to the factors identified in previous studies. For example, Crites' Personal Status vs Social Service factor appears to tap aspects of factors 3, 4, 10, 11, 13, 14 and 18. His Social Approval factor appears similar to factors 1 and 2. Although many of the aspects of his System factor are missing in the present factor pattern, factors 9 and 16 appear to reflect related components. The same is true for his Structure factor, to which factors 5 and 6 appear to have some relationship. These qualitative relationships suggest that further factor analytic study may make it possible to account for the variance involved in previously identified group factors in terms of a larger number of more specific factors.

It is of incidental interest to note that no counterpart of a Material Security com-

ponent appears in the present study, although it is an independent factor in the OARS and represents one of the bipoles in Crites' Factor A. It may be that the focus on a single occupation removes a good deal of the variance on this factor. On the other hand, the failure of such items as "I want to make a good living," "I'll have security," etc. to comprise a single factor may be a function of the specific population and sample involved in the present study.

The cluster of avoidance factors found in the present study was unanticipated, since factors of this nature have not appeared in the results of previous studies. Further exploration of the abient aspects of vocational motivation may be worthwhile.

The multiplicity of factors opens the possibility of great heterogeneity in sources of vocational interest. The extent to which any single individual utilizes all of these dimensions is left unanswered by the present study. Individual counselor-trainees may justify their choice of counseling in terms of a relatively small number of the factorial dimensions, since it is unlikely that many trainees would verbalize directly the needs for support, comfort, prestige and avoidance reflected in the factor pattern. The fact that such "underlying" dynamics appear to be identifiable through factor analytic treatment of a self-report Likert-type inventory supports the desirability of further application of factor analytic procedures in the area of vocational motivation.

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Vocational Interest Characteristics of Abnormal Personalities

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Implications taken from the literature reportedly associating maladjustment with various aspects of interest structure were tested using a population of hospitalized psychiatric patients. Ability to adjust outside a psychiatric hospital, bizarreness of symptoms, and social class status were found to bear some relationship to SVIB profiles although predictions gleaned from the literature were largely unsupported. Theoretical, methodological and practical dangers of over-generalization from abnormal to normal groups were discussed along with the implications of several new findings.

There has been increasing research and theoretical attention to the inter-relations between vocational interests and personality constructs. Many findings have been reported which allegedly link specific interests or patterns of interest, with maladjustment concepts or implications of personality abnormality. Unfortunately, these studies have relied heavily upon college student subjects who are maintaining an adequate adjustment, and personal report types of personality measures (Cottle, 1950; Darley, 1938). The relative absence of truly abnormal groups or more adequate personality measures raises considerable question regarding the justification of this growing body of implications (Darley & Hagenah, 1955; Evans, 1947; Feather, 1950). Illustrating this tendency, Berdie (1943, 1944), Tyler (1945) and Darley and Hagenah discuss many correlations of interest with various maladjustment con-

cepts. Sternberg (1955) reports that his factor four was positively loaded with maladjustment and political and economic values. He reports that his factor two was negatively loaded with maladjustment and interest in English, music and chemistry; whereas Brown (1954) relates the Strong Vocational Interest Blank (SVIB) Chemist and Production Manager Scales to maladjustive personality traits. Studying groups of salesmen and social workers who scored extremely high upon the Kuder scales representing their vocational choices, Lewis (1947) found correlated Minnesota Multiphasic Personality Inventory (MMPI) deviance. However, Wax (1951) found that a general lower level of Kuder interests was correlated with anti-Semitism (high A-S Scores) and suggests that lower interest levels represent energy withdrawn from the environment as a consequence of repression. Those few studies using significantly disturbed subjects support only relationships between general interest processes and personality abnormality. Small (1953) reports that disturbed children manifested less reality in their vocational choices which may result from weaker ego strength, thus allowing fantasy undue influence. Berdie (1946) discusses his finding that psychoneurotics are more constricted in their range of recreational inter-

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ests in terms similar to Wax. He theorizes that in psychopathology a person's attention becomes more focused upon himself, leaving less energy to be directed outward.

Problem

The problem was to test these interest-maladjustment implications using a clearly abnormal population such as would be found in hospitalized psychiatric patients. It was the writer's belief that such implications were spurious and would be demonstrated as such in this type of test that should bring them out into sharp clarity if they were valid. To avoid a confounding problem arising from the unreliability of psychiatric diagnoses, external behavioral measures of personality were utilized.

Hypothesis

Abnormal personalities are usually considered to possess lower intensity and/or crystalization of interests. Strong (1955) discusses specific interests as drives in a particular direction. Crites (1960) found that an MMPI measure of ego strength correlated positively with the number of high interests in a college student group. *Hypothesis One. Greater abnormality will be associated with lesser interest intensity.*

Significant dislikes or rejected areas of interest, in addition to preferences represented in intensity scores, are usually considered necessary for healthy interest structure. A flat, undifferentiated, interest profile frequently is thought to imply neurotic maladjustment. Some counselors interpret it to imply more severe psychopathology. *Hypothesis Two. Greater abnormality will be associated with lesser variability of interest.*

Interest patterns representing level of occupation have been hypothesized as relevant to motivation. The SVIB Occupational Level Scale (OL) has been advanced as measuring drive by many drive relevant findings reviewed by Darley and Hagenah, who conclude that the available evidence neither proves nor disproves a drive interpretation. This scale was the one used by Crites, whose findings led him to predict

that ego strength would be associated with an interest pattern containing greater numbers of high interests and lower occupational level; whereas ego weakness would be related to fewer high interests and higher occupational level. *Hypothesis Three. Greater abnormality will be associated with lower Occupational Level.*

Sexual identification frequently is considered a central problem in abnormal personalities, particularly schizophrenics. Klugman (1960) compared male psychiatric patients with normals using the Kuder, and found femininity of interest associated with psychopathology. On the other hand, marked masculinity of interests has been discussed in terms implying maladjustment by Brown (1954), Darley (1941), and Cottle & Powell (1949). *Hypothesis Four. Greater abnormality will be associated with greater masculinity of interests.*

Many findings suggest that the characteristic immaturity of abnormal personalities is equally reflected in their interest structure. In addition to the cited work of Small, Woolf & Woolf (1955) relate lesser language facility to lower scores on the SVIB Interest Maturity Scale (IM), and discuss their general findings as associating delayed differentiation of a self-concept with interest immaturity. Darley (1941) characterizes high IM scores as reflecting "the well organized, socially sensitive, generally mature, tolerant, and insightful individual." *Hypothesis Five. Greater abnormality will be associated with lesser interest maturity.*

Method

Personality abnormality may be externally, objectively measured by behavior during hospitalization or assessing adjustment level historically. The latter, termed *Chronicity* represents the first independent variable in this study and may be defined as *the ability to adjust outside a psychiatric hospital*. The former, termed *Morbidity* refers to bizarreness of behavior while hospitalized and constitutes the second independent variable. Because of its demonstrated relationships to many of the de-

pendent measures, *Social Class* was included as the third variable. To permit assessment of the influence of each of these variables singularly or in combination, a factorial design was used.

The three variables (chronicity, morbidity and social class) were ordered in a 2 by 2 by 2 factorial design, making a total of 8 treatment conditions. Chronicity was subdivided into *Chronics* who had been hospitalized for at least a year prior to testing, and *Acutes* who had been hospitalized for not more than three months and not for a year prior to the present admission. Morbidity was subdivided into *High Morbid* and *Low Morbid* distinctions, and social class into a *Middle* and *Lower* division, thus comprising the 8 conditions. Subjects were randomly selected by simultaneous classification upon the three independent variables and a three-way analysis of variance was repeated for each hypothesis, utilizing appropriate measures. It was assumed that subjects, either chronic or high morbid were more abnormal.

Subjects

The subjects were hospitalized psychiatric patients upon closed wards. High Morbids were usually delusional, psychotic and markedly disturbed. Five subjects were randomly selected for each of the eight conditions making an *N* of 40. They were all white, male, born after 1910, without demonstrable brain damage, and primarily diagnosed other than alcoholism. Schizophrenia was the diagnosis for 36 subjects with the remaining four scattered throughout the 8 cells diagnosed as; 1 psychosis, undifferentiated; 1 manic-depressive psychosis; and 2 severe psycho-neurotics. There were no statistically significant differences between the groups with respect to age, intelligence, medication or diagnosis. Following selection upon the operational criteria, it was additionally found that acute subjects had a mean of 12.63 months of previous hospitalizations, and chronic subjects had a mean of 90.25 months.

Measures

All subjects were administered the SVIB either individually or in small groups. Ex-

treme care was taken by two experimenters during all testings to insure that the subjects understood concepts and directions, made individual item judgments and demonstrated reliability in their responses. Interest intensity was quantified by counting the number of *T* scores over 40 on each subject's SVIB profile (*A* & *B*+'s). Following Crites, interest patterning refers to this same measure since he reports a point biserial correlation of .75 between judged patterned interests (one or more primary areas) and numbers of *A* & *B*+'s.

Interest variability was quantified by computing the standard deviation of each subject's *T* scores upon the 45 occupational scales. Occupational level, interest masculinity and interest maturity were measured by the SVIB OL, Masculinity-Femininity and IM Scales respectively.

Ratings upon the Multi-dimensional Scale for Rating Psychiatric Patients (MSRPP) developed by Lorr (1953) measured morbidity. This scale is so constructed that a subject will earn a high score either by excessive activity or excessive restraint of activity to a degree considered deviant from normal behavior. Social class was measured by Warner's Index of Status Characteristics (1949). Groups were divided at the median of the distributions for these two variables, and because subjects were classified upon the three independent variables simultaneously, the distributions were arrived at through a series of successive approximations attempting to effect as broad a range as possible. High morbid subjects had an MSRPP mean of 22.3 with that for low morbids being 11.9, while the total population ranged from 4.5 to 30.5. Middle class subjects had an ISC mean of 46.2 with the lower class mean being 66.0, in the total population's range from 32 to 70. Comparison of these ranges and means with the instrument manuals confirms that the concepts labeling the groups are appropriately descriptive.

Results

Major Hypotheses

Table 1 presents a summary of the *p* values for the analyses of variance con-

cerning major hypotheses and supplementary findings. The p values are for two-tailed tests of significance with assumptions of variance homogeneity satisfied by Bartlett's tests. Table 2 presents group means for all dependent measures. Hypothesis one, concerning intensity of interests, was not supported by chronicity and tends toward a significant reversal for morbidity. Hypothesis two, concerning interest variability, was reversed at the .003 level for morbidity, and the non-significant tendency was also in the reverse direction for chronicity. Hypothesis three, concerning occupational level, was not supported by either variable and the expected class difference appeared only as a tendency significant at

the .20 level. Hypothesis four, concerning masculinity of interests, was not confirmed, although Table 2 reveals a surprising feminine interest direction as a general pattern. Hypothesis five, concerning maturity of interest, was confirmed at the .05 level for morbidity.

Supplementary Findings

Filbeck (1961) developed a measure of response deviance (V) for the SVIB, which although intended to detect chance answering, appeared to measure interest abnormality. This scale demonstrated more, or tendencies toward, significant results than any other analyzed in this study. As may be gained from Tables 2 and 3, the direction was to associate greater response deviance

Table 1
Summary of Analyses of Variance p Values for the
Major Hypotheses and Supplementary Findings

Interest	Chronicity	Morbidity	Social Class	Chronicity \times Morbidity	Chronicity \times Class	Morbidity \times Class	Triple Inter- action
Intensity (A&B+'s)		.10				.20	
Variability	.12	.003			.20	.20	
Occupational Level			.20				
Masculinity- Femininity						.05	
Maturity (IM)		.05				.02	
Public Administrator		.02	.20		.20	.06	
Production Manager			.05	.05		.06	
Avg. Lvl. (mean T)						.10	
Response Deviance		.05		.20	.05	.005	.20

Table 2
Strong Scales and Derived Scores for
Chronicity, Morbidity and Social Class

Item	Chronic	Acute	High Morbid	Low Morbid	Middle Class	Lower Class
A & B+	8.2	7.0	8.5	6.7	7.8	7.4
T score S.D.	12.4	11.0	13.2	10.2	12.0	11.5
Occupational Level	49.7	51.0	49.6	51.2	52.5	48.2
Masculinity-Femininity	41.9	42.6	41.4	43.1	40.7	43.8
Interest Maturity	48.1	45.1	42.8	50.4	47.8	45.4
Public Administrator	28.6	24.7	22.4	31.0	28.9	24.4
Production Manager	32.8	33.0	31.6	34.2	30.0	35.8
Mean T Score	27.8	27.7	27.2	28.3	27.9	27.6
Response Deviance	22.6	19.8	24.0	18.4	21.0	21.4

with chronic status, high morbidity and lower class, and to continue this pattern in any possible combination of the three variables. Table 3 presents the pattern of morbidity by social class interaction for eight measures including response deviance. The suspected relation between response deviance and IM gained from this table was confirmed by a negative correlation of $-.61$ significant at the .01 level. Interest intensity scores are included in Table 3 to demonstrate that this variable does not follow the major patterns.

Strong states that the Public Administrator Scale (PA) appears to be an interest maturity measure between ages 25-55. This scale was analyzed and it follows the same pattern as IM although with greater sharpness and clarity. IM and PA correlated positively .69 significant at the .01 level. Low morbid averaged 50.4 upon IM and 30.95 upon PA, while high morbid averaged 42.8 and 22.4 respectively. The low morbid means were well within expectation for a heterogeneous occupational group while the high morbid average was significantly lower.

Analysis of Production Manager scores (PM) prompted by the literature, effected a better class differentiation than did OL, but the hypothesized association with abnormality was neither confirmed nor rejected. The direction of the interaction for chronicity by morbidity, shows that response deviance scores follow a pattern

reflecting chronic status and high morbidity as more abnormal, while PM scores manifest only a tendency. Analogous to the IM-PA relationship, Table 3 shows that PM sharpens and clarifies masculinity-femininity findings. An average level of interest intensity was computed by taking the mean of each individual's 45 T scores on the occupational scales (mean T). The only tendency towards significance (.10 level) is shown in Table 3.

Table 3 presents the cell means for the morbidity by social class interaction, where abnormality is associated with: greater response deviance, lesser interest maturity, lower average interest intensity level, lower Public Administrator, Production Manager and Masculinity scores, and greater variability of interests.

The following results were obtained by two counseling psychologists, making independent judgments of occupational groupings; they used Darley and Hagenal's system exactly, other than associating single occupation groups with those larger groups with which they correlated most highly. The total population tended to primary in groups VIII, IX and X with high morbid rejecting group V and low morbid rejecting group X. High morbid subjects were judged: primaries 16, secondaries 20, rejects 34; low morbid: 8, 28, and 24 respectively. *Aside from these occupational group tendencies, none of the interest-maladjustment implications taken*

Table 3
Cell Means for the Morbidity by Social Class Interaction

Item	High Morbid	Low Morbid	High Morbid	Low Morbid
	Middle Class	Lower Class	Lower Class	Middle Class
Response Deviance**	28.1	23.0		13.8
Interest Maturity**	39.3	44.4	19.9	56.4
Masculinity-Femininity**	37.1	41.9	46.3	44.3
Production Manager*	25.9	34.2	45.8	34.1
Public Administrator*	21.5	25.6	37.3	36.3
Mean T Score*	26.3	27.1	23.3	29.4
Standard Deviation	14.1	10.7	28.1	9.8
Interest Intensity	8.0	5.8	12.4	7.6
			9.0	

*Significant at 10% level of confidence.
**Significant at 5% level of confidence.

from the literature demonstrated any tendency to be associated with abnormality.

Crites' hypothesis that lesser ego strength would be associated with high OL and low A & B+ scores, whereas greater ego strength would be associated with fewer A & B+ and higher OL scores was not supported. The only tendency was in the reverse direction. Further, he justifies equating interest structuring with a number of A & B+ scores by reporting a point biserial correlation of .75 in college students. Using his method exactly, the present population has a point biserial correlation of only .39 with acutes .73 ($P=.001$) and chronics .09 (N.S.). High and low morbids did not significantly differ, averaging about the same as the total population. Thus the less abnormal acute subjects essentially equaled Crites' figure while the more abnormal chronics did not focus their interests into structured patterns. A t test comparison between Crites' A & B+ mean of 9 and the present sample's mean of 7.6 was significant at the .055 level, but this difference must be viewed with considerable caution, since comparing a college sample with any general group biases in favor of the hypothesis.

In summary, the interest patterns of abnormal personalities are so diverse that they appear not to support most of the hypotheses gleaned from the literature except those for interest maturity. However, greater abnormality was associated with lesser interest patterning, and maturity, but with greater interest variability, response deviance, and the tendency for primary interest in detailed office work, sales contact occupations, and particularly in the verbal-linguistic, creative-expressive fields. Several scales including Production Manager, Public Administrator, and a new measure of response deviance on the SVIB appear to have unique implications for the interest structure of abnormal personalities when social class is considered.

Discussion

The results of this exploratory study are many-faceted, and raise as many questions

as they partially answer. Within the framework of construct validity, if high morbidity (bizarreness of behavior) is viewed, in part, as weakness in ego controls, the findings fit well with previously cited ego process formulations. The high morbid pattern of comparative extremes as seen in more primaries and rejects, although less secondaries, greater variability, etc. possibly demonstrates inhibitory failures which permit autistic forces to govern response tendencies. It is also compatible with Woolf & Woolf's interpretation of low interest maturity as reflecting delayed differentiation of a self-concept, for regulatory functions are characteristic of self-concept theory. The association of extreme Kuder scores with MMPI deviance found by Lewis fits well, while the work of Wax, and studies reviewed by Darley & Hagenah suggest the added complexity of curvilinear relationships. That is, in less abnormal personalities where controls remain essentially intact, controls may be utilized excessively, thus absorbing sufficient energy to curtail investment in the environment as reflected in interests. The fact that low morbids tended to reject group X, the verbal-linguistic area used by Segal (1954) to validate the appropriateness in the occupational choice of his creative writing subjects, might demonstrate that low morbids maintain more control by rejecting all elements of expressional freedom including correlated interest structures. Segal found that group X individuals were more aware of their feelings and more easily expressed emotions. High morbid's rejection of group V supports and extends this theme, for group V individuals typically are unusually socialized in the sense of having introjected societal needs and deferring personal gain to the betterment of society generally. The sacrifice of personal need satisfaction to the benefit of others, or society, certainly implies control functions, and that not a single subject in this study had a group V primary is a fact striking in itself. Conversely, the fact that all subjects tended to primary in group IX, and high morbids particularly in group X or group IX (the

sales contact area correlated with opportunistic, philistine values) strongly supports this theme in that exploitation may reflect weaker controls through lesser socialization. That group IX has, in the past, been associated with good adjustment doubtless demonstrates a confusion of *being social* with *being socialized*.

The bulk of the evidence suggests that previous extrapolations from normal groups to abnormal personalities were unjustified. Almost without exception the previous maladjustment associations or implications with interest configurations, groups or occupations were unsupported. The correlational differences with Crites, which contradicted equating numbers of high interests with interest structuring, in severely abnormal personalities, demonstrates the danger even in methodology of over-generalization from normal to abnormal groups.

Unable to adjust outside a psychiatric hospital, chronic patients, whose interests were more scattered and diffuse as contrasted with being focused or concentrated, perhaps manifest a differing, structurally weaker type of integrative lack. Perhaps low interest maturity should be re-conceptualized as lesser *internalization of controls* while the more formidable chronicity dimension is viewed as lesser personality integration. In any event, the relation between lack of interest focusing, and inability to maintain an adjustment outside a psychiatric hospital appears to hold the most practical implications for rehabilitation.

These findings clearly support a conclusion by Patterson (1957) from his literature survey: "... the presence of a number of unrelated or inconsistent interests is related to maladjustment." Considerable agreement is also found regarding specific content areas when differences inherent in the use of more surface level interests tests, such as the Kuder, and less manipulatable instruments like the SVIB are taken into account. The typically found emphasis upon creative, literary, feminine types of activities corresponds nicely to the group X primaries and low Masculinity-Femininity

Scale scores. Similarly, the relative absence of primaries in groups I, II and IV, demonstrates the typical lack of scientific and mechanical interests found in disturbed groups. However, the prevalent group IX, sales contact, primary along with the complete absence of group V, social welfare, primaries, suggests that reported preferences for working with people really represent a dependent, manipulative, exploitative role. In fact, the results generally agree with the characteristic findings of dislike for routine, specified duties, complying with other standards and liking for freedom and uncontrolled self expression. An apparent exception, the detailed office work area, was also found by Klugman who discussed it in terms of the feminine correlations with clerical interests. Rather than relying upon the so-called "Escape Scales" to suggest that an individual's vocational goals are more determined by autistic pressures than reality considerations, the response deviance scale would appear to offer a more quantitative, less subjective, empirically based measure. Alternatively, clinical impressions that lack of agreement between an individual's Kuder and SVIB profiles is related to maladjustment was confirmed by Pool (1963) who quantified SVIB and Kuder profiles so that the single number obtained (representing their degree of similarity) could be correlated with the number of MMPI scales significantly elevated, with the finding of a significant negative correlation.

Summary

Interest-maladjustment implications taken from the literature were tested by administering the Strong Vocational Interest Blank to 40 hospitalized psychiatric patients. Bizarreness of behavior, ability to adjust outside a psychiatric hospital and social class were the independent variables in an analysis of variance, factorial design. The findings generally did not support hypotheses, although greater abnormality was associated with lesser interest pattern-ing and maturity, but with greater variability, response deviance, and the tendency for primary interest in detailed office work.

sales contact occupations, and particularly in the verbal-linguistic, creative-expressive fields.

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The Application of Certain Principles of Client-Centered Therapy to Short-Term Vocational-Educational Counseling^{1, 2}

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After an intensive six-week training program for 30 experienced counselors in an NDEA Counseling and Guidance Institute, the counseling supervisors, on the basis of multiple criteria selected the ten most successful counselors and the ten least successful counselors. The final tape recorded interviews of all twenty counselors conducting short-term vocational-educational counseling with "normal" secondary school clients were secured. The recordings were then rated by ten judges on five hypothesized characteristics of a therapeutic relationship. Significant differences were found to exist between the most successful and least successful counselors on three of the five characteristics. Considerable agreement was also found between the ratings by the supervisors and the judges.

The purpose of this study was to ascertain if any significant differences existed between two groups of counselors, one rated most successful and another least successful by their supervisors, during an intensive six-week counseling training program. Specialists judged taped recorded interviews by the counselors on five key characteristics of client-centered therapy (principles put forth by Carl R. Rogers) during short-term vocational-educational counseling (two or three interviews) with "normal" secondary school students.

It was felt by the author that this research would have considerable significance to the field of secondary school counseling with a typical student population and would also have meaning for those dealing in short-term counseling. Throughout the literature dealing with client-centered ther-

apy, there have been many researches to show that the principles hypothesized by Rogers do, in fact, work effectively with disturbed and more mature clients and, perhaps more important, on a long-term, continuing basis (15 or 20 interviews). There have been very few studies, however, that have attempted to apply these principles to the work of the counselor in a secondary school setting, despite the fact that many counselors and counselor-educators maintain the conviction that the principles of client-centered counseling work at all levels with virtually all kinds of problems. Thus, there appeared to be considerable need for research in this area. Presently, Rogers' theory has been assumed a priori as being both applicable and beneficial to secondary school students by advocates of this approach; but, practically no empirical research evidence has been accumulated to indicate its actual validity with this kind of sample and with the kinds of problems characteristic of these clients. Virtually all of Rogers' theorizing and actual practice has been with either college students or

¹Acknowledgement is given to Fadil H. Zuwaylif, San Fernando Valley State College, Northridge, California for statistical consultation.

²A presentation made before The American Personnel and Guidance Association, Boston, Mass., April 11, 1963.

neurotic adults with 15 to 20 or more interviews per client. The major question arises, does this system work in a secondary school setting where only a limited number of counseling interviews are feasible and qualitatively different problems are handled?

The necessary and sufficient conditions of therapeutic relationships have been stated by Rogers many times (1957, 1961, 1962). They are essentially: 1) Empathic Understanding, 2) Unconditional positive regard, and 3) Congruence or genuineness. Two additional characteristics which seemed to the author to be in harmony with the theory of client-centered therapy were added. They were: 1) Comfort—Counselor expressed to client a feeling of being at ease, and 2) Respect—Counselor showed in his reactions to client's remarks that he respected the client's judgments and viewpoints.

The major hypothesis of this study was that there were no significant differences between the counselors who were judged as being most successful and those judged as being least successful on any of the five characteristics of therapeutic relationships. Thus, the investigation attempted to determine the following:

1. Was there a significant relationship between success in counseling and the degree of *empathy* exhibited by the counselor as judged by specialists in the field of counseling?
2. Was there a significant relationship between success in counseling and the degree of *unconditional positive regard* exhibited by the counselor as judged by specialists in the field of counseling?
3. Was there a significant relationship between success in counseling and the degree of *genuineness* or *congruence* exhibited by the counselor as judged by specialists in the field of counseling?
4. Was there a significant relationship between success in counseling and the degree of *comfort* exhibited by the counselor as judged by specialists in the field of counseling?
5. Was there a significant relationship between success in counseling and the degree of *respect* exhibited by the counselor as judged by specialists in the field of counseling?

In reviewing the pertinent literature, it was found that Barrett-Lennard (1959), using his relationship inventory, studied a

series of 42 clients dealt with by 21 therapists in which he had several measures of the degree of change in the client. He administered the inventory to each client and therapist after the fifth interview and at the termination of therapy. He found that those clients who showed more change perceived more of the hypothesized conditions (empathy, unconditional positive regard, congruence and availability or willingness to be known) in their relationship with their therapist at the time of the fifth interview than did those who eventually showed less change. Three of the four conditions were found to be significant. He also found that it is not enough that the therapist hold these attitudes. They must also be perceived by the client.

Halkides (1958) took an earlier and a later recorded interview from 20 recorded cases, ten of which could be classed by several objective criteria as more successful and ten categorized as less successful. These interview samples were then presented in a random manner for judging. Three judges worked together during the training period when they tried to become sensitive to the attitudinal qualities of the therapist by listening to interview recordings and making ratings of them. The judges then worked independently and listened to counselor and client interactions and rated each on a 7 point scale. Reliability of the judges was high, i.e., .90. It was also found that a high degree of attitudinal conditions on the part of the counselor, i.e., empathy, positive regard and congruence were associated with the more successful cases at the .001 level of significance.

Truax (1961) studied eight schizophrenic patients, four of them showing improvement on psychological tests and four showing some deterioration, and brought out evidence of the importance of empathy. Samples were taken from the first six interviews with these patients—384 samples in all. Four judges listened to these samples independently and rated the degree of empathy exhibited by the therapist. When the ratings were analyzed, it was found that the improving patients received con-

sistently more empathy than did those who were not improving.

Lesser (1961), on the other hand, found that counselor empathic understanding was unrelated to counseling progress. This raised some questions concerning the generally accepted notion of the value of empathy, especially since the client group on the whole showed positive counseling movement. These findings also ran counter to previous studies, thus pointing out the need for further research in this area. Williams (1962) found that educational-vocational counseling with college students restores a normal degree of congruence among the client's perceptions of himself, his ideal self and other persons.

Method

The NDEA Counseling and Guidance Training Institute took place during the summer of 1962 at San Fernando Valley State College, Northridge, California, under the Directorship of the author. A relatively homogeneous group of 30 secondary school counselors participated in the institute. The institute staff was comprised of four full-time members, three of whom were directly involved in supervisory practicum experiences. The dominant phase of the institute was the extensive supervised counseling accomplished with volunteer secondary school students recruited from local high schools for vocational-educational counseling. The supervisory staff represented diverse theoretical orientations and had considerable experience in both teaching and supervising counselors prior to the institute.

At the conclusion of the institute:

1) The supervisors rated the counselors, using multiple objective and subjective criteria,³ as to their effectiveness and categorized the ten most successful counselors and

the ten least successful counselors from the group of 30. There was unanimous agreement on all of the 20 counselors ultimately selected by the supervisors.

2) Tape recorded interviews of the 20 counselors, counseling with secondary school age students with vocational-educational problems were secured. A minimum of four clients were counseled by each of the enrollees during the six-week institute. The taped interviews secured were sessions with the final client seen by each counselor.

3) Ten specialists in the field of counseling at the secondary school level were selected to serve as judges in critically listening to the taped interviews of the 20 counselors. They had no knowledge of any of the counselors involved and knew nothing of their effectiveness or prior ratings by their supervisors. One of the potential problems centered around selecting specialists to judge the taped interviews, i.e., it was felt important to pick judges who did not come from the same "psychological or theory world" in which the supervisors resided or we would merely be securing a replication of what was already accomplished by the supervisors. The ten specialists differed from the counseling supervisors in that the specialists were all full-time secondary school counselors, had considerable secondary school counseling and prior teaching experience, none had completed the doctorate, and they also subscribed to a variety of counseling points of view. The supervisory staff, on the other hand, were counseling psychologists with considerable college experience but with a minimum of recent secondary school counseling or teaching experience. (In a recent study by Combs and Soper (1963), they also discussed this problem and suggested that further research was necessary to determine if experts from a different school of thought would have found similar results. They did, however venture a prediction that the results would be similar.)

4) A five-point rating scale was devised for the judges to use in rating the tapes on each of the five characteristics listed above. All of the judges were given thor-

³Some of the criteria utilized were gathered through rating scales of counseling sessions, peer ratings after critiquing tapes, observation through closed circuit T.V. and one-way vision screens, client ratings of counselor, etc.—all of which evolved around counselor performance and client movement.

ough instructions in the characteristics that they were to rate. Operational definitions were provided for practice in judging and rating and practice was provided in listening to taped interviews. Fifteen counselor-client interactions were selected from each interview for the judges to hear and were presented in a random manner. An interaction consisted of the complete lead made by the counselor in response to the client's remarks. A typescript was made of the interview and each counselor-client exchange was numbered. Fifteen of these interactions were finally randomly selected from the total number of responses and were played to the judges. All of the judges listened to the same interactions and filled out the scales simultaneously and independently.

5) Upon completion of the rating of the taped interviews by the judges, the results were tabulated and *t* tests were computed to determine if any significant differences existed between the two groups on any of the five characteristics.

Table 1

Summary of Differences Between Above Average and Below Average Counselors on Five Hypothesized Characteristics of Therapeutic Relationships

Characteristic	Below Average Counselors N=10	Above Average Counselors N=10	<i>t</i>
Empathy			
Mean	2.97	2.05 ¹	3.475*
Variance	.360	.340	
Unconditional Positive Regard			
Mean	2.76	1.98	3.077*
Variance	.327	.315	
Congruence			
Mean	2.34	1.98	1.707
Variance	.196	.248	
Comfort			
Mean	2.44	2.14	.975
Variance	.578	.367	
Respect			
Mean	2.72	1.88	2.975*
Variance	.557	.239	

*Significant at .01 level of confidence.
¹Lower mean scores signify the characteristic is present to a greater degree than higher mean scores.

Results

Table 1 indicates that three of the five hypothesized characteristics of therapeutic relationships were found to be significant at the .01 level of confidence. In all three cases, namely, empathy, unconditional positive regard and respect, the most successful counselors exhibited more of these qualities than did the least successful counselors as rated by judges listening to their taped recorded interviews. Despite the fact that congruence and comfort were not found to be significant, in both cases the most successful counselors received better ratings on these scales than did the least successful counselors.

Discussion

Findings of this study appear to be partially compatible with previous studies done with different samples by both Halkides (1958) and Barrett-Lennard (1959). In both studies they found significant differences between more successful therapists and less successful therapists on scales of empathy, unconditional positive regard and congruence. This study, on the other hand, found the first two to be significant, but not congruence. Interestingly, two cases which were rated as being the least successful counselors by the supervisors and judges were rated by the judges as being exceedingly congruent, but to be lacking in empathy, positive regard and respect.

Closely related to principles of client centered therapy was the characteristic labeled "respect for client." Even though this characteristic had not been delineated by Rogers or his students, it seemed to be an integral aspect of client centered therapy and was hypothesized by the author as being an important ingredient in counseling with secondary school students. This characteristic was, in fact, found to be significant at the .01 level of confidence. Thus, it can be assumed that the two hypothesized conditions listed by Rogers (empathy and unconditional positive regard) plus a third suggested by this research (respect for the client) are able to distinguish the above average, more successful counselors from

the below average, less successful counselors. It can also be said that there was considerable agreement between the supervisors and judges in their ratings of the most and least successful counselors. This fact proved particularly interesting in that the judges had such little data on which to make a decision, namely, one tape recording; whereas the supervisors had close contact with the counselors for six weeks—coupled with the fact that they had different backgrounds.

Summary and Recommendations

After an intensive six-week training program for 30 experienced counselors in an NDEA Counseling and Guidance Institute, the counseling supervisors, on the basis of multiple criteria selected the ten most successful counselors and the ten least successful counselors (in terms of their professional status at the completion of the program). The final tape recorded interviews of all twenty counselors conducting short-term vocational-educational counseling with "normal" secondary school clients were secured. The recordings were then rated by ten judges on five hypothesized characteristics of a therapeutic relationship. Three of the conditions (empathy, unconditional positive regard and respect) were found to be significant at the .01 level of confidence. Two of the conditions (congruence and comfort) were found to be not significant. It also showed that there was considerable agreement in the ratings made by the supervisors and the judges despite the different means of rating utilized and backgrounds of the rating bodies.

This research could have particular meaning for secondary school counselors who feel a propensity for client centered therapy and, on the basis of this study, indicates that counselors who are rated as being more successful do in fact possess some of the conditions hypothesized by Carl R. Rogers.

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A Factor Analysis of the Berger Willingness to Accept Limitations Scale—A Brief

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Recently, Berger (1958, 1961, 1963) has hypothesized and has shown empirical evidence supporting his hypotheses that "willingness to accept limitations" is significantly related to college achievement. Berger (1961) has suggested that his 16-item Willingness to Accept Limitations (WAL) Scale measures attitudes pertaining to self-acceptance and the idealized self-image. He has subdivided his WAL Scale into four subscales: 1) High Standards, 2) Wholeheartedness Regarding Achievement, 3) Belief in Achievement with Little Effort and 4) Willingness to Risk. The subdivision of the WAL Scale into these four subscales seemingly was accomplished only on intuitive grounds. Evidence supporting the subdivision of the WAL Scale into subscales has not been shown. Patterson (Berger, 1961) in his comment on Berger's ideas was not satisfied with these subscales.

The purpose of this study was to study the possible validity of these four WAL subscales by comparing them to subscales derived by factor analysis methodology.

The WAL Scale was administered to 84 students who were enrolled in an introductory psychology class at Kansas State University. These tests were scored in the manner suggested by Berger (1961). Product-moment correlations were computed among the 16 items of the WAL Scale. The resulting correlation matrix (presented in the extended report) was then factored by the powered vector method (Overall and Porterfield, 1963). The powered vector method is more similar to the group centroid method than many of the other conventional methods. Successive factor axes are passed through clusters of tests which are homogeneous and relatively independent of other tests. The particular advantages of the powered vector method are that the three major objectives of factor analysis (parsimony, orthogonality and meaningfulness) may be approached directly and without rotation. Computations were performed on an

IBM 1620 computer using a program devised by John E. Overall. With this specific program the extraction of factors continues only until factors begin to account for less total variance than does one of the studied variables.

Five identifiable factors emerged in the analysis of the 16 items (the unrotated powered vector analysis loadings for these five factors are presented in the extended report). Groupings of the items according to the five factors was accomplished using a $\pm .30$ factor loading as the lower limit. These factor analysis derived item groups were then compared to the item groups represented by Berger's (1961) subscales (the specific item group comparisons are presented in the extended report). Inspection of the factor analytically derived item groups and the Berger subscales revealed no resemblances. It appears that Berger's four WAL subscales are not supported by a factor analysis of the WAL Scale.

The observed lack of agreement between the item groups created by factor analysis and the intuitively developed subscales should caution the use of the Berger WAL subscales either for research or for applied purposes. This study, however, should not be construed as being damaging to the theoretical or pragmatic usefulness of the Berger WAL Scale. Only the possible validity of the WAL subscales has been challenged by the results from the described factor analysis.

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¹A full report of this study may be obtained without charge from the author, Department of Psychology, Kansas State University, Manhattan, Kansas.

Comments and Letters

Anxiety Level, Need for Counseling, and Client Improvement in an Operational Setting

Many studies (Sperber, 1961; Sarason & Campbell, 1962; Spielberger & Katzenmeyer, 1959; Branca & Podolnick, 1961) have revealed the role of anxiety in relation to conditioning, performance under stress and in social learning situations. It is generally conceded that in mild anxiety, performance may be improved by increasing the alertness and motivation of the subject (Shaffer & Shoben, 1956; Patterson, 1958). Large amounts of anxiety simply lead to or strengthen ego-defensive responses (Weiner, 1959; Sinha & Singh, 1959; Mandler & Sarason, 1952).

The Manifest Anxiety Scale (MAS) developed by Taylor (1953) and the Anxiety Index (AI) developed by Welsh (1952) have been used to measure level of anxiety. Both have been developed from the MMPI. Welsh found that his Anxiety Index was useful in predicting improvement in therapy for several groups. Parker (1961) tentatively concluded that the AI might be of practical importance in determining which persons would be judged by the counselor as being highly motivated or less motivated for counseling.

Purpose

The purpose of this study was to ascertain the relationship between measured anxiety, estimated need for counseling and estimated improvement resulting from counseling clients of the Pennsylvania Rehabilitation Center.

The following three hypotheses were formulated:

H₁: There will be an equal distribution of subjects among the categories of anxiety level and client improvement.

H₂: There will be an equal distribution of subjects among the categories of need for counseling and client improvement.

H₃: There will be an equal distribution of subjects among the categories of anxiety level and need for counseling.

Procedure

It was decided to use counselor judgment to test all hypotheses and to use the Welsh AI to test hypotheses one and three. Subjects were all admissions to the Pennsylvania Rehabilitation Center from the period of December 1, 1961, through May 31, 1962, who had MMPI scores from which the AI is derived. A total of 164 subjects was obtained.

The Pennsylvania Rehabilitation Center is a comprehensive rehabilitation facility operated by the Pennsylvania Bureau of Vocational Rehabilitation to provide rehabilitation services for the disabled. It has a 348-bed capacity, including the 48-bed medical wing. Medical services include general medical supervision, rehabilitation nursing, physical, occupational, speech and hearing therapy and psycho-therapy. The Vocational Training Department provides training in 18 major areas, including technical trades and business education.

In addition, psychological testing, counseling and vocational evaluation services are provided. Referrals to the Center are made by the 12 rehabilitation districts in the State. The MMPI is administered as part of the intake test battery given to all new admissions with the exception of those who have excessive hearing difficulties or who are obviously mentally retarded. MMPI scores on the 164 subjects were withheld from counselors and retained in the psychometrist's file until the study was concluded.

The five counselors had a wide range of backgrounds and counseling philosophies but did have a minimum of two years of rehabilitation counseling experience. All admissions were known by their respective counselor for at least nine weeks. On August 21, 1962, each counselor was provided the names of his admissions on separate slips of paper. The following instructions were read: "Sort these name cards in rank order from high to low according to your perception of client's need for counseling at time of admission." Individual clients were then ranked according to "need."

After tabulation, name cards were scrambled and returned to the counselors two days later with the following instructions: "Sort these name cards in rank order from high to low according to your perception of the extent of client improvement shown as a result of counseling to the time of his discharge or to the present time." Individual clients were then ranked according to "improvement."

Welsh AI scores were then derived from MMPI scores and individual clients were ranked on "anxiety" at time of admission.

In order to ascertain the reliability of counselor rankings, counselors were asked to re-rank clients

on the same variables after a time lapse of five weeks. The results of this reliability check yielded positive rho correlation (Need = .31 to .98, Improvement = .07 to .79) which were moderately high. There was considerable counselor variability, however.

Each of the variables used in counselor ratings (need for counseling and improvement resulting from counseling) and AI results were divided into three categories and the chi-square test of significance was applied to the three comparisons: need-improvement, need-anxiety and anxiety-improvement.

Results and Discussion

By grouping rankings into three equal-sized categories—high, moderate and low—on each of the variables, three by three tables were set up and the chi-square test of significance was applied to each table. The results of those analyses are reported in Table 1.

Table 1

Results of Chi-Square Tests of Significance

Variable Comparisons	df	χ^2	P
Anxiety-Improvement	4	14.72	.01
Need-Improvement	4	9.17	.10
Need-Anxiety	4	4.17	.50

The difference among the groupings according to anxiety and improvement is significant at the .01 level of probability. In general, clients who score higher on the Welsh AI appear to make less improvement. However, inspection of frequencies in the different cells does not indicate a clear linear relationship. The cause of this relationship is not clear; it may be that the counseling program, as established, is not relevant to the high anxiety group or that some other factor which causes a high anxiety score may be inhibiting improvement.

In the "need-improvement" comparison, the results were not highly significant statistically ($P = .10$). Since ratings of "need" and "improvement" were made by the same judges with only a two-day period of time intervening, this may in part represent a halo effect.

The groupings of subjects according to need and anxiety did not yield significant results ($P = .50$). Therefore, there appears to be no relationship between measured anxiety and the counselor's perceived need for counseling according to the criteria used for this population of subjects.

Summary

The authors attempted to ascertain if a relationship existed among the variables of measured anxiety, need for counseling, and client improve-

ment in an operational setting. Anxiety level was ascertained by use of the Welsh Anxiety Index. In order to determine "need for counseling" and "improvement," counselors were asked to rank their clients according to these variables.

On the basis of moderately high reliability results of counselor rankings, it was decided that rankings should be pooled and the chi-square test of significance applied to each of the three comparisons: need-improvement, need-anxiety and anxiety-improvement.

Clients who scored low on the AI tended to make the most gain in terms of counselor rating of improvement while clients who seemed higher in the Welsh AI appeared to improve less.

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The Relationship Between Values and Perceived Problems

The present study was designed to investigate the relationship between the number of problems a person perceives as being bothersome and his score on a values scale. The general hypothesis tested was that students who hold high values in certain areas will experience more problems in those areas than students who do not hold high values in those areas. In other words, the more one values something, the more likely one is to have problems centering about that value. No previous studies on this topic were found but previous studies on the values of college students include Todd (1961), Arsenian (1943) and Kemp (1961).

The following hypotheses were tested.

1. Students scoring high on the Economic scale of the Allport-Vernon-Lindzey Study of Values will check more problems on the following areas of the Mooney Problem Check List than students scoring low on this same scale:
 - a. Finances, Living Conditions, and Employment.
 - b. Social and Recreational Activities.
 - c. Adjustment to College Work.
 - d. The Future: Vocational and Educational.
 - e. A combination of the above scales.
2. Students scoring high on the Social scale of the Study of Values will check more problems on the following areas of the Mooney than students scoring low on this same scale:
 - a. Social and Recreational Activities
 - b. Social-Psychological Relations
 - c. Personal-Psychological Relations
 - d. Courtship, Sex, and Marriage
 - e. Home and Family
 - f. A combination of the above scales.
3. Students scoring high on the Religious scale of the Study of Values will check more problems on the following scales of the Mooney than students scoring low on this same scale:
 - a. Social Psychological Relations
 - b. Personal-Psychological Relations
 - c. Home and Family
 - d. Morals and Religion
 - e. A combination of the above scales

No specific predictions are made for the three remaining Study of Value areas although every value area, including the three omitted, will be related to every area on the Mooney in the Results section. The combination of Mooney areas was based on a logical consideration of what problem areas on the Mooney would be related to the value scales on the Allport-Vernon.

Method

The subjects in this study were 24 male and 64 female students in two undergraduate educational

psychology courses at a large mid-western university. The age range was 18 to 58 with a mean age of 21 years, 4 months.

Each student was administered the Allport-Vernon-Lindzey Study of Values and the Mooney Problem Check List, Form C, consecutively in the same 75 minute period. The students were instructed not to sign their names in order to reduce response bias.

The students were divided into upper and lower quartiles based on their scores on each of the Study of Values scales. Theoretical, Economic, Aesthetic, Social, Political, and Religious. There were 22 persons in each quartile. It was possible for a person to be in the upper quartile on, say, Religious, and the bottom quartile in Theoretical. The upper and lower quartiles on each of the three selected Study of Values scales (Economic, Social, and Religious) were then compared on the basis of the number of problems checked on each individual Mooney area and the combined areas. The comparisons were made on the upper and lower quartile because it was felt that strongly held values could more easily be separated on this basis. Sex differences in responding to the Study of Values were checked for a sub-sample and found to be non-significant although noticeable. It seemed allowable to combine the sexes to increase the N .

The combined score resulted from counting the number of problems checked in each of the areas of the Mooney. This score was treated as a raw score and a one-tailed t test was used to check the significance of difference between the means for the upper and lower quartiles (Ferguson, 1959).

In order to determine whether one or more Mooney areas was overly determining the combined Mooney area comparisons between upper and lower quartiles on the three SV scales, an analysis of each of the six SV scales (upper and lower quartiles) with every individual Mooney problem area was undertaken. The scores for each area of the Mooney for each student in the upper and lower quartiles as determined by the Study of Values scales was summed and a mean and variance calculated. A one-tailed t test was applied. The Cochran-Cox correction method was used where the population variances were unequal.

Results

No Study of Values scale showed a significant difference between upper and lower quartiles when checked against Mooney total problems. In order to get an idea of the independence of the values, the subjects comprising the upper quartile on each Study of Values scale were compared, and only 11 subjects ranked in the upper quartile on as many as three scales.

Table 1

Average Number of Problems of Upper and Lower Quartiles for Combined

SV Scales	Mooney Areas		
	Combined Mooney Areas Upper Quartile (N=22)	Lower Quartile (N=22)	t
Economic	22.45	18.64	1.03
Social	26.45	17.68	1.78*
Religious	21.86	16.14	1.22

*Significant at .05 level, one-tailed *t*.

Table 2

Values of *t* Between Upper and Lower Quartile Groups on the Allport-Vernon-Lindzey Study of Values Compared on the Mooney Problem Check List Areas

Study of Values	HPD	FLE	SRA	SPR	PPR	CSM	HF	MR	ACW	FVE	CTP	Total Problems
Theoretical	1.04	.76 ^a	2.07	2.15+	1.89	1.81	.64	1.27 ^a	.08	.91	.00	1.44
Economic	.45	.71 ^b	.78	1.19	.91	.08	.08	1.18	2.08*	1.50 ^a	.04	.81
Aesthetic	.79	1.60	1.43	1.82	.15	1.32	1.37 ^a	.55	1.73 ^a	1.62 ^a	.13	1.11
Social	.79	.42 ^a	1.94*	1.27	1.01	1.80*	1.10 ^a	.78 ^a	.98 ^a	.65 ^a	1.34	1.51
Political	.45	.19	2.23+	1.57	.72	.30	.57	.29	.80 ^a	.35	.16	.62
Religious	.39	1.57 ^a	1.29	1.59	1.49	.70	.35	.53	.27 ^a	.64	.72	.59

^a Cochran-Cox Correction method used^b Areas of predicted relationship are underlined* significant at .05 level (one-tailed *t*)+ significant at .05 level (two-tailed *t*; no prediction made)

HPD—Health and Physical Development

FLE—Finances, Living Conditions, and Employment

SRA—Social and Recreational Activities

SPR—Social Psychological Relations

PPR—Personal Psychological Relations

CSM—Courtship, Sex, and Marriage

HF—Home and Family

MR—Morals and Religion

ACW—Adjustment to College Work

FVE—The Future: Vocational and Educational

CTP—Curriculum and Teaching Procedure

When the three Study of Values scales on which predictions were made (i.e., Economic, Social and Religious areas) were checked against the number of problems in the predicted combined Mooney areas (see Table 1), the only significant difference between the upper and lower quartiles was found on the Social Values scale; it was significant at the .05 level. This particular combined area included the Mooney problem areas in Social-Recreation Activity, Social-Psychological Relations, Personal-Psychological Relations, Courtship, Sex, and Marriage, and Home and Family. When comparisons were made on the thirteen specific

Mooney areas on which predictions were made (see underlined results in Table 2), only three were found significant at the .05 level; persons having high Economic Values scores had more problems in Adjustment to College Work, those having high Social Values scores had more problems in Social and Recreational Activities and in Courtship, Sex, and Marriage, and none of the predictions for the Religious Values area was significant.

When the relationship of all of the areas of value were compared to problem areas on which no predictions were made (see Table 2), two other

significant differences were found which were significant at the .05 level (using a two-tailed t test). In each instance the persons holding high values in that area tended to have fewer problems in the particular Mooney area. Analysis of the particular relationships indicates that these results seem reasonable; people with high Theoretical values tend to have fewer problems in Social-Psychological Relations and people with high Political values tend to have fewer problems in Social and Recreational Activities.

Discussion

The results of this study indicate that people who show an interest in social values perceive themselves as being bothered by more problems in the area revolving around social and recreational activity and also in the area of courtship, sex, and marriage than do people who place less emphasis upon social values. However the significant differences must be interpreted cautiously because one would expect some differences to reach significance on a chance basis when this number of comparisons is made. Consequently, the following findings and conclusions should be regarded as showing a tendency in the direction hypothesized and, hopefully, should stimulate more investigations. In this vein, then, there is a tendency for high scorers on the Economic scale to see more problems arising in the area of college work; on the other hand, high scorers on the

Theoretical scale seem to see fewer problems in the area of social-psychological relations, and high scorers on the Political scale tend to view themselves as having fewer problems in the area of social and recreational activity than low scorers. Subsequent research with more refined instruments is needed to answer some of these questions more tightly. One subjectively senses that it is difficult to feel conflicted or to have problems about things for which one feels neutral or one evaluates as being unimportant. Now it would appear helpful if we had empirical evidence that would shed additional light upon this value-problem dimension.

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Further Validation of a Counseling Readiness Scale

Several studies have been reported which relate personality and demographic attributes of clients to termination or continuation in therapy (cited in Heilbrun, 1962). Most relevant to the present investigation, Heilbrun found (1961a) and replicated (1961b) substantial personality differences between college males who dropped prematurely from personal counseling and those who continued. Initial differences for females failed to appear on replication. Heilbrun and Sullivan (1962) then empirically derived drop-stay scales by combining subjects from these two samples and finding differentially endorsed items on the Adjective Check List (ACL) (Gough & Heilbrun, in press) for these two client classes. However, only limited validation evidence was presented for these Counseling Readiness (CRs) scales. No independent sample of personal clients was available, although the scale did discriminate between male vocational-educational clients defined as drop and stay. The female scale results were in the predicted direction but not significant. The purpose of the present study was to investigate the validity of the CRs scale, particularly the female form, for personal clients.

Method

Subjects

A new sample of personal clients from the University Counseling Service, University of Iowa, was studied. The same definition of a drop client as used in the previous investigations was adopted, namely, one who initiated personal counseling but with whom therapy failed to continue past five interviews because of some client-motivated action. Such actions included failure to appear for the intake (diagnostic) interview, failure to appear for the first assigned therapeutic interview after intake, or dropout from personal counseling after therapeutic interviews 1-5, inclusive. Excluded from the drop category were any clients for whom termination was instigated by explicit counselor action or for whom brief (<6 interviews) counseling was deemed successful in achieving limited counseling goals by the counselor. Stay clients were those who went through the diagnostic and assignment procedures and remained in counseling at least six interviews beyond intake.

Client category information plus mean number of counseling interviews are given in Table 1. The

Table 1
Categories of Personal Counseling Clients Defined in the Present Study

Type of Client	N	Males	N	Females
		Mean No. Interviews		Mean No. Interviews
Drop	14	1.3	19	0.6
Stay	18	23.2	31	22.2
Successful treatment (<6 interviews)	2	4.0	5	2.8
Poor counseling risk	8	0.1	15	0.0
Referred elsewhere for treatment	8	0.0	8	0.0
Total	50		78	

last three categories of clients on Table 1 were added in this study with these *a priori* expectations regarding CRs scores. Successful treatment (<6 interviews) (ST) should be effected with higher counseling-ready clients. Poor counseling risk (PCR) indicates a client to whom the intake interviewer ascribed poor motivation for counseling; some 91% of these clients were not assigned to a counselor, and the remaining two failed to go beyond one counseling interview. CRs scores should be low for the PCR group. The referred-elsewhere-for-treatment (RET) category includes clients who were considered upon intake to be ready for counseling but, typically, where the pathology was such as to instigate referral to a psychiatric facility. CRs scores in such cases should tend to be high.

CRs Measures

CRs scales are scored from the 300-item ACL given under self-description instructions. The male CRs scale contains 52 adjectives and the female scale, 37. Raw scores are converted to *T* scores ($\bar{X} = 50$, $SD = 10$) based upon separate norms for general college population males and females, higher scores indicating greater readiness.

The ACL was individually administered upon application for service and prior to the intake

interview. The CRs score was available to the initial interviewer and assigned counselor prior to client contact, and since the ST, PCR and RET categories are based upon counselor statement rather than client action, the possibility of contamination between CRs score knowledge and statement cannot be discounted. However, it is the investigator's opinion that the CRs score, coded on the test summary, was given relatively little weight by the counselors; in fact, the meaning of the code remained unknown to many. Nevertheless, CRs results for these three client classes were not analyzed statistically and should be regarded as informative rather than validation. Scale validity is to be gauged by the comparison of drop and stay clients for whom the defining operations are client behaviors.

Counselors

The majority of the assigned counselors were supervised graduate students in clinical or counseling psychology, whereas the intake interviewer was standardly a Ph.D. staff psychologist.

Results and Discussion

CRs means and *SD*s of the various client groups and the results of statistical tests are reported in Table 2. Drop and stay client group differences

Table 2
CRs Data for Various Types of Personal Counseling Clients

Type of Client	CRs				
	CRs Mean	Male	<i>t</i>	Female	
		<i>SD</i>		CRs Mean	<i>SD</i>
Drop	51.1	13.8	2.15*	53.4	8.7
Stay	62.2	13.7		62.0	9.0
ST	57.0	3.0 ^a		62.4	14.6
PCR	44.8	8.7		51.3	9.0
RET	63.6	9.7		66.6	10.5

* $p < .05$

** $p < .01$

^aOnly two Ss in this group.

were significant and in the predicted direction for both sexes. The mean CRs scores for the three remaining client types are also in the expected direction for both sexes; PCR clients were those with relatively low scores, and ST and RET Ss provided moderate to high scores.

Table 2 data indicate some degree of scale validity in predicting client behavior, but practical utility is another matter. Prognostic hit-miss proportions provide some indication of the utility of the CRs scale in a college counseling center. The hit-miss criterion was whether CRs scores falling above or below the male or female group means were associated with stay or drop as defined in this study. Despite the initial reservations about the female CRs scale, it actually outperformed the male form (72 vs. 59% in overall accuracy). Also, the prediction of counseling stay appears to be more successful than counseling drop (79 vs. 57%). Thus, if the CRs were to be used as a screening adjunct, it might be most effectively employed to identify high counseling-ready clients who would be expected to take advantage of the counseling opportunity offered.

Although the present study affirms the validity of the CRs, it seems unlikely that it will find an immediate audience as far as client selection usage is concerned. It does represent an economic and promising avenue though to the investigation of a particular form of defensive behavior which should be of concern to those interested in the dynamics of the psychotherapeutic process. For example, Polder (1963) has recently employed the CRs in studying sex-role sensitivity in normal college males, his results suggesting that non-conformity to masculine stereotype may be one source of premature termination.

One more comment regarding counseling duration research seems warranted. In response to an invited paper by Mendelsohn (1961) at a recent psychological convention, the tenor of discussant remarks reflected skepticism regarding the importance of duration research relative to "success" of outcome investigation. It was contended that psychotherapeutic gain could be effected after brief contact with counseling center clients thereby obviating the importance of predicting the number of interviews. However, a statistic from the present study suggests that CRs rela-

tionships with behavior-change outcome are far from trivial. It was found that in 68% and 57% of the female and male drop cases, respectively, the client failed to appear for even a single therapeutic interview. Defection in such cases would seem to represent a substantial problem in bringing counseling aid to bear for those who are in need of it.

Summary

The validity of male and female forms of a counseling readiness scale (CRs) was supported by finding that personal counseling clients who terminated prematurely scored lower than those who continued. The CRs was more accurate in predicting continuation in treatment than dropout. Scale scores of three additional client classes were in line with expectancy; poor counseling risks had relatively low scores, whereas clients referred elsewhere for treatment or who gained from brief counseling had relatively high scores.

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Cross-Cultural Communication and the Semantic Differential

In counseling, particularly with clients of differing cultural backgrounds, differences in attitudes toward concepts or ideas can lead to communication problems that may interfere with the counseling process. An experience at a recent bilingual conference suggests that the semantic differential provides a promising technique for evaluating the differences in cultural reaction to key words.

The University of Texas and the University of Mexico sponsored a conference on international tensions in Mexico City in February, 1963. A group of six Mexican and eleven American (U.S.A.) psychologists met to discuss the problem of international tension and to establish joint research projects to assess the factors involved in the creation of international tensions. The semantic differential was administered to the participants

in the conference as part of a demonstration of its potential use as a research tool in the identification of nationalistic stereotypes.

Ten bi-polar pairs of adjectives were used, with a seven point rating on each pair. The pairs included the following terms, as well as their nearest Spanish equivalents; practical, impractical; kind, cruel; intelligent, dumb; superior, inferior; happy, sad; clean, dirty; brave, cowardly; peace-loving, warlike; honest, dishonest; hardworking, lazy.

The participants ranked four different national groups on the scales; instead of Osgood's statistic for evaluating generalized distance between the profiles, it is more useful in this case to separately evaluate differences in the level and the shape of the profiles. Using the Wilcoxon matched-pairs signed-ranks test, the Mexicans ranked "Russians" significantly lower and "Americans" significantly higher than the American group, ($p < .05$). There were no significant differences between the levels of the ratings for the terms "Canadian" and "Mexican."

The Spearman rank correlations between profiles of the two groups are: "Canadian" $+ .64$, "Russian" $+ .70$, "American" $+ .79$, and "Mexican" $+ .55$, (.05 level = .564). The comparison of the shapes of the profiles shows a high degree of correspondence between the Mexican and the American psychologists. The largest differences occurred on two scales when evaluating "Mexicans." Apparently the highly sophisticated American psychologists were susceptible to the traditional stereotype of Mexicans as happy but not very clean. These are the most extreme points on the profile, and they show a sharp disagreement with the Mexicans' evaluation of themselves.

The Americans also view "Russians" and "Americans" as considerably alike, ($r_s = +.60$), while

the relationship between "Americans" and "Mexicans" is negative, ($r_s = -.83$). The Mexicans may tend toward a similar evaluation but the correlations of $+ .55$ and $-.18$ are not significant.

Even though the bi-polar pairs of adjectives had been selected specifically to sample attitudes toward nationality groups and are not very applicable to other types of concepts, the participants had no difficulty in rating such terms as "envy," "aggression," "hostility" and "fear" on these scales.

There is an extremely high correspondence between the shape of the profiles of the Americans and Mexicans for the terms "envy" and "aggression." The Spearman rank order correlation for both terms is $+ .88$ ($p < .01$). On the terms "hostility" and "fear" there is still a great deal of agreement. The rank order correlation for "hostility" is $+ .66$ ($p < .05$) and for "fear" is $+ .52$ (n.s.). However, the Wilcoxon test indicates that Mexicans rate "envy" and "hostility" more negatively than Americans ($p < .01$).

In relating to a person from a different culture, the psychologist brings to the relationship an already established set of cultural stereotypes. These apparently occur not only as reactions to national stereotypes, but may also occur as different levels of response to emotionally loaded terms. Particularly in the subtle communication of counseling, the counselor must be sensitive to these differing responses or communication will be, at the very least, distorted. Where a counselor is working intensively with one or more specific groups, the semantic differential may provide a very rapid, sensitive instrument for identifying response stereotypes that could cause communication difficulties.

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The Current Status of Counseling Psychology

Psychologists, along with representatives from other professions, during the past decades have shown increasing interest in providing counseling to individuals. In providing this helping service psychologists have made use of the knowledge and methods developed in their science. Psychological research and theory about differential psychology, personality development, the structure of personality, aptitudes and interests, psychological measurement and occupational and vocational psychology have been used most by psychologists who counsel. Psychological methods of testing, interviewing, individual teaching and psychotherapy frequently have been employed. Current learning theory and concepts of social psychology have been resorted to often by counselors but as yet have contributed relatively little to counseling. The psychologist who counsels is

differentiated from counselors in other professions primarily by the extent to which he employs these psychological theories and procedures.

The psychologist who counsels must be concerned with both the happiness and satisfaction of the individual and the welfare of the community to which he belongs. The purpose of counseling is to help persons become aware of how they differ from one another, that is to help persons learn about themselves and to aid them to use this knowledge as they define, strive for and attain their goals.

Psychologists who counsel increasingly have regarded themselves as "counseling psychologists" and since 1940 many of these psychologists have acted and talked as if a profession, a sub-specialty in psychology, were developed, and this they have called "counseling psychology." As awareness of

this specialized activity has increased on the part of persons who practice it, this specialty has developed increasing reality.

At the time of the reorganization of the American Psychological Association, one of the original divisions was designated as the Division of Counseling and Guidance Psychologists. In response to the emergence of the specialty, the title of the division later was changed to the Division of Counseling Psychology. This division has always been one of the largest divisions in the association and has included as members psychologists who counsel, both those who consider themselves counseling psychologists and other psychologists, and psychologists who perhaps did not counsel but either were engaged in practices closely related to counseling, including training and research, or who originally joined the division because of an interest in counseling and guidance but with no more direct concern than that interest.

At the time of the establishment of the American Board of Examiners in Professional Psychology one of the three recognized specialties was counseling and guidance; the title of this also later was changed to Counseling Psychology. Thus, the three applied psychological specialties with which the ABEPP has been concerned have been counseling psychology, industrial psychology and clinical psychology.

The psychological literature about and directly related to counseling has been abundant for decades, but in 1953 a quarterly journal for psychologists concerned with counseling was established, the *Journal of Counseling Psychology*, and the contents of this publication continue to be directly relevant for psychologists who counsel.

After the second world war the Federal government, the Veterans Administration, recognized the need for an increased number of counseling psychologists and the training program in the V.A. was established for counseling psychologists. Since that time graduate students in that specialty have received subsidies and practical experience and training in V.A. installations in preparation to their becoming counseling psychologists.

Along with this development the American Psychological Association's Education and Training Board initiated the systematic evaluation and approval of departments of psychology offering doctoral degrees in counseling psychology and since then the Committee of Evaluation of that board has been concerned with doctoral programs in two psychological specialties, clinical psychology and counseling psychology.

Counseling psychology thus has attained increasing entity as a specialty within the profession of psychology. It has its professional organization, its professional and scientific journal, its means for recognizing professional competency, its differentiated, recognized, and supported graduate education programs in foremost universities, practitioners engaged in an increasing number of situa-

tions including universities and colleges, hospitals, government, and industry, and it has a base in continuing scientific research.

If psychologists are to continue to develop counseling services and to improve counseling methods provided to students, patients and others, they must identify the problems that now face counseling psychologists and attempt to understand and resolve them. Every professional specialty faces problems involving relationships among persons within that specialty, relations between persons in the specialty and the persons the specialty serves, and relations between persons in the specialty and persons in other activities and groups. The development of counseling psychology depends on relations between counseling psychologists, the Division of Counseling Psychology, and such individuals and groups as university graduate schools, administrators in education, industry, and government, co-workers in related professions such as social work, medicine, teaching, and nursing, other divisions of the American Psychological Association, committees and boards of and related to the American Psychological Association, prospective and current graduate students in psychology, and students, parents, patients, and employees to whom counseling is provided.

The questions counseling psychologists must ask themselves resemble many of the questions asked by persons in other professions. These questions include:

1. How can the role, purpose and function of the counseling psychologist and his profession best be currently defined for purposes of recruiting persons into the profession, establishing and developing educational programs, deciding matters of legislation and certification, facilitating employment and classification, and clarifying the perception of counseling on the part of those who are counseled and those who wish others to be counseled?
2. To what extent are distinctions needed between counseling psychology and other related specialties, particularly school psychology, educational psychology, industrial psychology and clinical psychology?
3. How can persons entering graduate programs in counseling psychology be attracted in greater numbers and with greater aptitude and potential?
4. How can further research be stimulated that will provide a basis for the development of more effective counseling programs and procedures? How can research done by persons other than counseling psychologists be incorporated into counseling psychology to achieve these purposes?
5. How can young and productive counseling psychologists be encouraged to assume professional and scientific leadership so that their enthusiasms and competencies can as

quickly as possible contribute to progress in counseling psychology?

6. How can publications in psychology, both textbooks and journals, present most effectively current and contemporary ideas and viewpoints and provide for expression of a broad diversity of opinions, values and attitudes?
7. How can employers of counseling psychologists be induced to place a market value on these psychologists commensurate with the values placed on persons who teach, who provide administrative services and who provide other clinical services?
8. How can counseling psychology, itself a specialty within psychology, best allow for the sub-specialties within itself so that marriage counselors, rehabilitation counselors, counselors for foreign students, etc., enjoy the benefits of identifying with their own groups and at the same time benefit from and lend their support to the broader specialty of counseling psychology and the profession of psychology?
9. How can counseling psychologists be provided with opportunities for professional advancement and salary increases while devoting the major part of their time to counseling rather than having to turn to teaching, research or administration?
10. How can counseling psychologists be induced to produce original, creative and imaginative research ideas and to subject these ideas to careful and systematic research?
11. How can increasing financial support be obtained for research in counseling psychology?
12. How can counseling psychology best identify with and obtain benefit from psychologists whose major responsibility and concern is not counseling but who are actively engaged in psychological productions related to counseling? These include vocational and occupational psychologists, measurement psychologists and personality theory psychologists.

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To the Editor:

The problem of predicting college grades is more than a problem of finding the equation which will give the best prediction as Willingham suggests (this *Journal*, Winter, 1963). The particular grading policy used by the institution is of crucial importance but is usually ignored. Regardless of the quality of students who are admitted, a fairly constant proportion each year flunk out as freshmen as a result of grading procedures which are based on the assumption that grades should approximate a normal curve distribution. In order to increase the percentage of accurate predictions

of success it is necessary to admit students who are expected to make up the proportion that fails.

This problem does not end at the freshman year, however, since many instructors apply the same philosophy of flunking some students in every course regardless of the year the student is in or the level of ability at which the group is functioning. Thus if a group of top students on the basis of freshman grades were put together in a sophomore course, some of those students would be likely to fail, while students with much lower freshman averages could pass if they were in a class of students with lesser ability. For this reason, prediction on the basis of freshman grades alone leaves much to be desired. This problem is further complicated by the fact that most graduation requirements call for an average at or near the C grade which is seen as successful, respectable meeting of the course objectives. Most systems of grading give more C grades than any other single grade in nearly all courses. Again this is true regardless of the overall level of ability of the students. The student who passes all his courses with the minimal passing grade does not remain in college very long.

It seems that we can not greatly improve our accuracy in predicting grades until a way is found to include in the equation the peculiarities of the local grading system.

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To the Editor:

C. H. Patterson's article on the nature of supervision (this *Journal*, Spring, 1964), which nicely brings together the literature on the subject, provoked many responses and notions in this reader. Let me initially affirm that supervision is, indeed, a neglected aspect of our work, and that empirical research on the supervisory process is quite sparse; and then go on to highlight some questions that are raised by this article.

Patterson, of course, may, if he wishes, limit his student's freedom by not permitting him "to work with clients on a basis or with an approach which is inconsistent with the point of view" of his course. But to see this as being *necessary* to the definition of the supervisory relationship and the practicum experience is another, distinct consideration. And to argue his position from within client-centered theory is even a third, separate matter.

The questions seem to fall in three major areas: the stance of the supervisor toward the supervisee, the function of threat in a "growth" relationship, and the "nature" of client-centered theory and of client-centered counselors.

1. *The stance of the supervisor.* Patterson argues that "the student must be given responsibility for his clients," and that the major responsibility

ity of the supervisor is "to the student and his growth and development as a responsible, independent counselor." But it is questionable if Patterson wants the supervisee to be responsible for his own development as a counselor or if he wants the supervisee to become independent of the supervisor and his approach. Patterson *qua* supervisor seems to imply that his efforts are towards developing a responsible, independent, *client-centered* counselor, which would seem to contradict the earlier assertions quoted above.

Even though the supervisor has decided that a client-centered approach is best for himself, he must grant to the supervisee the same privilege, else he is denying him a basic freedom. It simply does not follow—either logically or experientially—that what I think is best for me, is necessarily what is even desirable for someone else. The decision of a supervisee to become something different should not and does not necessarily undercut the integrity or the strength of the supervisor's position. To distinguish between influence and imposition may be helpful. Influence is inevitable in any human relationship, but imposition denotes a conscious effort to bring the other to a pre-established position, in the establishment of which he has not collaborated.

I ask simply—why not, as a supervisor, help the student develop into a better counselor, rather than a better client-centered counselor, or what have you. The general question of importance seems to be: Is it possible to assist another in becoming something which you are not? The way in which one answers this question would seem to be of overwhelming importance to his basic definitions of the counseling process.

An additional word. Attempting to have counselors-in-training adopt one of three mutually exclusive approaches or some such seems to be a distortion of human experiencing. At this point, we do not really have enough categories to capture the full range of human interactions. We can only characterize them in the grossest terms, and surely the characterizing we do employ is constrained severely by both language and logic. And the counseling process would seem in some small way to be concerned with the felt constraints upon one's experience, and with a re-examination of the part language and logic are playing in one's own characterizing processes.

2. *The function of "threat."* Patterson's view of threat is that it "inhibits and restricts learning, that it leads to defensiveness and resistance," and that therefore it must be reduced to the minimum. Though this view is true, it is incomplete. He does not distinguish between, and among, threats. For instance, it would seem to be a truism to say that counseling, even when entered into voluntarily and even when "pursued relentlessly," is threatening. The client-centered approach attempts to minimize the external threats—those emerging from the counselor or from the relationship—in

order that the internal threats be maximized. The supervisor makes it possible for the student to confront himself, indeed, to "threaten himself." The questions raised are: Cannot threat be used to grow? Indeed, must we be threatened before we can grow? Further, should we *protect* the supervisee from the threat of his own self-examination? Learning (or change, or growth) occurs also from dissonance, from the creating of a problem, rarely from when we all agree on what is known. There would seem to be some value at some time to disequilibrium, to dissonance, indeed, to threat, the roles of all of which have been vastly underestimated in this article.

3. *Client-centered theory.* Patterson's view of the client-centered approach seems to contribute to the dilemma. In essence, he speaks of the client-centered approach as an established system, as a "fully-blown known." The question is, is this so? Simply put, has the client-centered position been fully developed? Have we stopped learning about or developing client-centered theory? Is the system now closed, and not open to re-examination, or to reconstruction? This is certainly not true of Rogers, nor of his recent Wisconsin associates, nor of the University of Chicago Counseling Center group. Indeed, if it were true, it would be in conflict with some of the philosophical and modern science underpinnings basic to client-centered theory.

Further, such a position would seem to deny or to ignore the diversity and basic differences among client-centered counselors. With respect to being client-centered, Patterson seems to argue from an "either you are or you aren't" position. In addition to the usual constraints imposed by any dichotomy, such a position fails to take into account an essential aspect of the client-centered framework. *Counseling is not client-centered unless it is experienced that way by the counselee*; this is inherent to some extent in the definition of client-centered counseling. Being client-centered is not something you are by yourself but is dependent to some degree upon how you are experienced by the counselee. And to say that a client who views us differently is simply misperceiving us is just not the answer.

It is difficult to understand how you would train—in a client-centered way—someone to be *only* client-centered. For Patterson to say both that a student has to develop and accept the client-centered approach in his practicum *and* that "the student is not being forced to conform to a rigid system, but is helped to find his own style of counseling within the framework of the attitudes which are considered the necessary and sufficient conditions for therapeutic personality change" by Rogers may well-nigh be contradictory. These conditions are quite broad, indeed broad enough to allow in one of any orientation—client-centered, Freudian, Jungian, Adlerian, etc. Rogers' considerations of necessary and sufficient conditions, rather than differentiating client-

centered theory from others, move toward the establishment of a *general* theory of personality change.

Chris D. Kehas
University of Chicago

To the Editor:

In 1948 the question "Is psychotherapy dependent upon diagnosis?" was raised and answered in the negative (Patterson, 1948). The position taken was essentially that on the one hand, there is a common element and essential homogeneity among emotional disturbances, and on the other hand, there are common elements among various approaches to psychotherapy.

Since that time there has been a trend among psychotherapists to accept this point of view—a point of view, incidentally, which has long been held by most psychoanalysts, at least in practice, since the methods of psychoanalysis have been the same regardless of the problems or diagnoses of clients. Menninger and his associates (1958) began to speak of the unitary concept of mental illness in 1958. Their recent book (Menninger, Mayman, & Pryser, 1963) is devoted to this concept. In it they note that many psychiatrists are coming to the conclusion that there is but one type of mental disturbance (pp. 5-7). Menninger, who first began to question diagnosis at the beginning of his career, remarks: "I am somewhat ashamed to admit that it has taken me a quarter of a century to realize that this formula (treating the patient according to his diagnosis) rarely works out this way in actual practice" (Menninger, 1959).

While the field of psychotherapy seems to be at least on the way to resolving the diagnosis problem by eliminating diagnosis (there are of course some exceptions; see, e.g., Zigler & Phillips, 1961), counseling psychology and counselors still seem to be mired in the problem, with writers still manfully struggling to get one foot at least out of the mud and on solid ground. Thus we still have attempts to develop the earlier formulations of Bordin (1946) and Pepinsky (1948), e.g. by Byrne (1958) and Sloan & Pierce-Jones (1958), and most recently by Robinson (1963). There seems to be little agreement on the useful and relevant categories. As I note in a comment on the Byrne and Sloan & Pierce-Jones papers, "there seems to be no logical—or even psychological—classification which is satisfying or generally acceptable, and which leads to non-overlapping, discrete categories on the same level of abstraction. . . . The failure to find discrete categories . . . may be because they do not exist" (Patterson, 1958). Perhaps we should consider whether the difficulty in developing a classification which is logical, psychological and useful is evidence that we are attempting to break up something which is homogeneous and unitary. Perhaps the failure to define differences which make a differ-

ence in treatment (counseling) is because there are no significant differences, or differences which relate to differences in treatment.

While this may well be the case, perhaps our failure to recognize this in regard to the proposed classificatory systems referred to above is because they include categories of behavior which are treated differently. A major lack in the discussion of diagnosis and counseling has been a failure to attempt to relate the classificatory systems to differential counseling procedures. It would seem to be clear that a classification which bore no relationship to counseling procedures would be of no value for counseling. Perhaps it has been assumed that there are, or should be, different counseling methods associated with the various categories into which client problems are classified. The attempt to look at the diagnostic categories with this in mind led to the recognition of the reason for the persistence of such attempts at classification.

This look was stimulated by the recent paper by Robinson (1963). Robinson's paper is an important advance upon earlier formulations. In the opinion of the writer, however, it doesn't go far enough in reducing the categories, or in eliminating irrelevant categories.

Let us examine the five categories proposed by Robinson in terms of the methods or approaches to handling the problems represented. One of these categories is knowledge, which refers to lack of information about the environment. The appropriate method for dealing with problems in this category would appear to be the providing of the necessary information. The question then arises, is this a method of counseling? It would appear that the answer should be that while the providing of information may be included in counseling, information giving by itself is not counseling, nor is it a type or method of counseling.

We may take the same position with regard to the category which Robinson labels skills, which involves the remedying of skill deficiencies or the development of higher level skills. Skill training, whether remedial or otherwise, is a function which most counselors would not define as counseling. It is a teaching function, remedial or otherwise.

When we then direct our attention to the remaining three categories—personal adjustment, relating to others and maturity—it is apparent that they represent problem areas which are generally agreed to be within the province of counseling. But when we attempt to determine if there are separate or discrete counseling methods or approaches to each of these areas, it would appear that there are not. The question, then, is whether there is any value in separating these categories. I do not believe that there is. They may all be subsumed under a single category which might be called personal-social-emotional problems—a term which is a familiar one to 'all' of us.

It appears, then, that if we analyze the proposed diagnostic categories in terms of their implications for differential treatment, we can eliminate two of them as not presenting problems which would generally be included as counseling problems. The remaining categories can be combined, and we end up with a single category of problems which are amenable to counseling, as distinct from the giving of information or teaching.

Emotional disturbance is then, unitary, and the appropriate method of dealing with it is by counseling. There is no good experiential or experimental evidence for the value of attempting to break down emotional disturbance into subcategories which should be dealt with by differential counseling procedures—if such could be defined and clearly separated.

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Response:

I agree with Patterson that with most student psychotherapy there is great advantage in dropping out most past attempts at diagnostic categorization. Whether giving information and skill instruction are included under the term "counseling" is a matter of word usage. Counselors should do each of these things well and calling them counseling may make counselors feel less guilty in doing them.

On the other hand, it seems to me that Dr. Patterson has missed the two main points of my article. (1) In the past too much emphasis has been given to correcting disabling conditions; equal "diagnostic" and counseling efforts need to be given to developing strengths. Perhaps his letter illustrates such focussing on remedial work. (2) During the process of counseling the counselor has to make judgments or "diagnoses" from time to time as to which basis of learning, e.g., conditioning, insight, relationship, etc., is most relevant at that moment.

Francis P. Robinson
Ohio State University

To the Editor:

In a recent investigation (Pool & Brown, 1964), these writers found the number of discrepancies between vocational interests as measured by the Kuder Preference Record and the Strong Vocational Interest Blank to be positively related to "psychological maladjustment" as measured by the Minnesota Multiphasic Personality Inventory (MMPI). A subsequent examination of this data uncovered certain relationships which had been erroneously computed and not included in the publication; this is a brief report of these relationships and of a re-analysis of the published data.

In contrast to the earlier analysis, the number of Kuder-Strong discrepancies was subsequently found to be significantly related to age ($r = -.47$) and to intelligence ($r = -.43$) as measured by the Army General Classification Test. The correlation between age and intelligence was positive but not significant ($r = .19$).

To evaluate the possible confounding effects of age and intelligence in the previous analysis, partial correlations were run between MMPI scores and number of discrepancies. With age and intelligence held constant, the relationship between discrepancies and number of MMPI scales above a T-score of 65 dropped from .30 to a non-significant .14. The other reported significant correlation with the Depression ($r = .36$), Psychopathic Deviate ($r = .41$) and Hypomania ($r = .26$) scales actually increased moderately ($r = .40, .64, .44$, respectively).

These results do not modify the previous findings appreciably, but it would seem important for future investigators to take into account the influence of these two variables in designing further studies of Kuder-Strong discrepancies.

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Test Reviews

The California Psychological Inventory: II. As a Measure of Client Personalities

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University of Iowa

This is the second of two special reviews of the *California Psychological Inventory* (CPI), the purpose of the first having been to summarize some of the research on its usefulness in the assessment of the normal personality and the purpose of this one being to indicate its value in the measurement and differentiation of client personalities. Although counselors are often acutely aware of the differences which exist among the personalities of clients with different problems, very few studies have been conducted to determine how and why they differ. In fact, findings on client personality differences as measured by the CPI come largely from two studies: a factor analysis by Crites, Bechtoldt, Goodstein, and Heilbrun (1961), and a profile analysis by Goodstein, Crites, Heilbrun, and Rempel (1961). In these investigations two types of clients, Personal-Adjustment (PA) and Vocational-Educational (VE), were compared with nonclients (NC). Clients were classified as PA if they endorsed the following statement on their application blank when they requested counseling: "Would like to discuss my feelings about myself and others; some personal problems which are bothering me." And, they were categorized as VE if they marked either or both of the following problem descriptions: "Would like to discuss my abilities, interests, aptitudes; my occupational plans for the future" and "Would like to discuss my courses, grades, classes, study techniques; my progress here at the University." The differences which were found on the CPI between these two client groups, and between them and nonclients, are discussed first with reference to the results of the factor analysis and then the profile analysis. A final section summarizes the overall findings and synthesizes them into composite CPI descriptions of PA and VE client personalities.

Factor Analyses of Client Personalities on the CPI

The factor analyses of the CPI for the PA, VE and NC groups were performed on combined samples of males and females which numbered 124 Ss each (Crites, et al., 1961). The complete centroid method was used for the factor analyses,

but it was also supplemented with multiple regression analyses which made it possible to select those scales which accounted for the greatest percentage of variance in the CPI. For each group the analyses yielded five factors, but they were not defined by exactly the same scales, and the relationships between them were somewhat different, as Table 1 and Figure 1 indicate. Thus, the question of primary interest which arises from these results is: What is the relationship between client problem and client personality structure as assessed by the CPI?

Personal-Adjustment Clients

In all of the analyses, Factor I was defined by the Self-control (Sc) and Good impression (Gi) scales, but, in contrast to the other groups, for the PA clients it was also related to the Achievement via conformance (Ac) and Psychological-mindedness (Py) scales. Together, these scales suggest that PA clients associate self-regulation and creating a favorable impression with conforming behavior in achievement situations and sensitivity to the "inner needs, motives, and experiences of others." Factor II in this group also includes a loading by the Ac scale but is comprised primarily of the Dominance (Do), Self-acceptance (Sa) and Sociability (Sy) scales, which, in combination with the Capacity for status (Cs) and Social presence (Sp) scales, define the familiar extraverted or expansive personality. Factor III is formed by the Communality (Cm), Responsibility (Re) and Socialization (So) scales, with a slight loading by Tolerance (To), and is probably best interpreted as conforming and conscientious behavior. Factor IV, which seems to be most characteristic of PA clients in view of their problems, has loadings on the Achievement via independence (Ai), Flexibility (Fx) and Intellectual efficiency (Ic) scales, as well as correlations with the Cs, Py and To scales. In other words, the *node* of the PA client personality appears to be a cluster of response tendencies which might be most accurately characterized by the construct, the *Rebellious Intellectual*. Finally, Factor V for PA clients is represented by the Femininity (Fe) and Sense of well-being (Wb) scales, with some loading on Sp, indicating that in this group behaving in a

Table 1

Results of a Factor Analysis of the California Psychological Inventory (CPI)
for Groups of Personal-Adjustment (PA) Clients, Vocational-Educational (VE) Clients
and Nonclients (NC) (from Crites, Bechtoldt, Goodstein, & Heilbrun, 1961)

CPI Scales	Factors														
	PA	I VE	NC	PA	II VE	NC	PA	III VE	NC	PA	IV VE	NC	PA	V VE	NC
Class I Measures of Poise, Ascendancy, and Self-Assurance															
1. Dominance	08	05	15	74	72	76	-09	19	-10	-09	08	-08	-02	-09	-04
2. Capacity for Status	04	23	06	37	66	48	-02	-06	04	39	14	27	13	09	15
3. Sociability	04	15	16	62	77	50	01	20	00	00	11	03	20	22	35
4. Social Presence	02	09	-22	44	66	29	-18	05	08	26	03	40	36	36	51
5. Self-Acceptance	-05	-13	-14	64	69	57	-16	24	-05	08	04	07	-08	06	06
6. Sense of Well-Being	21	38	29	10	07	-04	22	30	21	15	23	28	35	10	36
Class II Measures of Socialization, Maturity, and Responsibility															
7. Responsibility	12	22	20	05	11	04	34	14	39	17	20	11	-16	-31	-04
8. Socialization	17	27	31	05	-06	17	32	53	32	-07	01	-12	02	-10	-05
9. Self-Control	50	65	58	-04	-15	-10	07	06	04	-01	03	06	11	01	-01
10. Tolerance	07	35	11	-06	27	-05	33	04	26	51	38	48	22	06	18
11. Good Impression	61	69	67	22	25	-10	-15	-09	-12	-04	-06	-11	06	03	08
12. Communality	-12	-08	-09	06	-12	-11	39	58	43	-11	-03	06	06	08	06
Class III Measures of Achievement Potential and Intellectual Efficiency															
13. Achievement via Conformance	45	22	38	33	10	44	01	48	07	04	29	04	-09	00	-07
14. Achievement via Independence	19	-02	03	02	04	07	-01	03	14	70	70	65	-01	-02	-10
15. Intellectual Efficiency	02	20	06	10	33	17	26	28	24	51	38	50	21	24	16
Class IV Measures of Intellectual and Interest Modes															
16. Psychological Mindedness	33	14	26	19	26	24	-14	15	-08	36	38	24	21	17	26
17. Flexibility	-07	-13	-21	-17	-07	-08	-07	-20	-12	59	43	55	20	35	07
18. Femininity	01	-09	-11	05	-08	-05	00	-06	24	02	-03	04	-51	-58	46

Note.—Loadings of $\pm .30$ or higher are italicized, since they were the ones used to interpret the factors.

conscientious and sympathetic way goes with freedom from self-doubt and self-confidence in social interactions.

That the PA client may be a *Rebellious Intellectual* and that his problems may be related to this personality orientation are suggested not only by the validities of the Ai, Fx and Ie scales but also by the adjectives which judges have used to describe high scorers on these scales. Some of the more relevant of these adjectives, for clients who come for counseling to discuss their feelings about themselves and others, are: cynical, demanding, egoistic, idealistic, independent and self-reliant, intelligent, pleasure-seeking, sarcastic and verbally fluent. Many of these adjectives are contradictory, however, to those which characterize the other factors, particularly Factors I and III.

For example: high scorers on Sc (Factor I) are rated as inhibited, patient, self-denying and slow, and on Cm (Factor III) as moderate, reliable, sincere and tactful. Yet, these factors are correlated with Factor IV through common variance on the Py and To scales, the implication being that in these interrelationships there may be found at least one of the sources of conflict in the PA client personality. The problems which they experience may well reflect the antagonism and incompatibility of response tendencies which, on the one hand, involve rebellion against social mores (Factor IV and Py) and, on the other, necessitate conformity to them (Factors I and III and To). Torn between a desire to be intellectually free as an individual and a longing to be accepted by others, the PA client seeks counseling in order to resolve

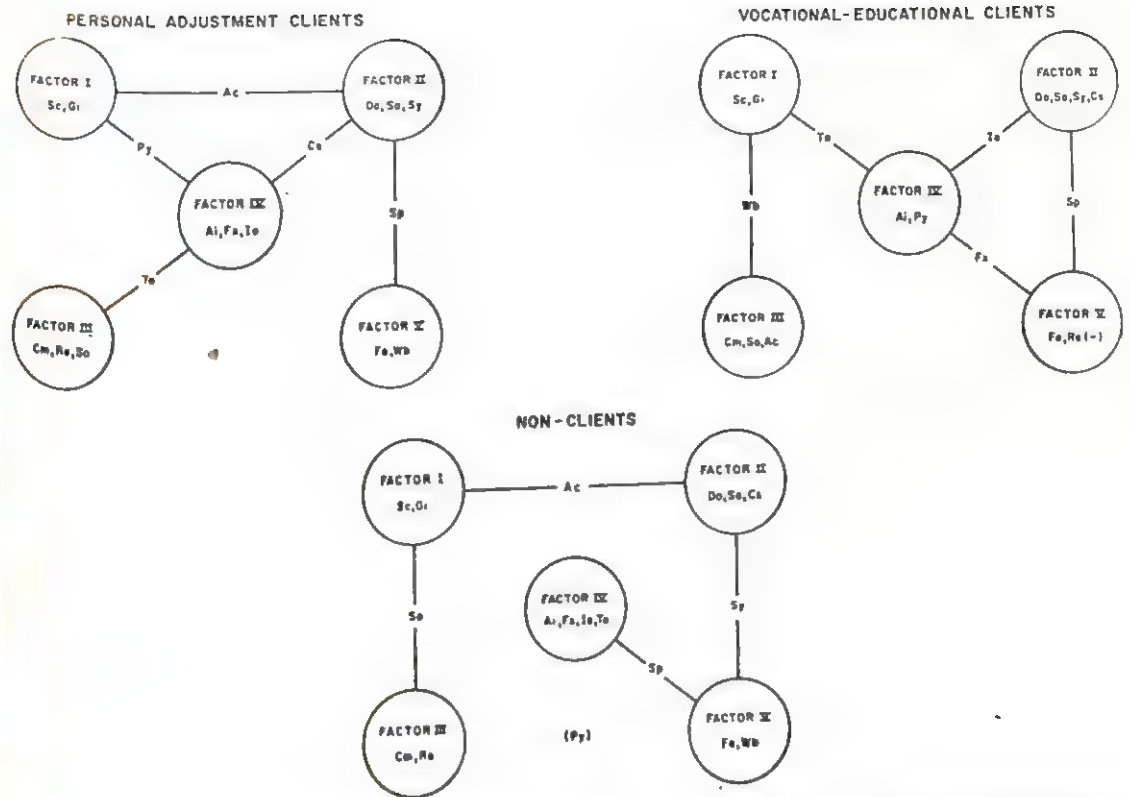


Fig. 1. Factorial structure of the CPI scales for the personal-adjustment, vocational-educational and nonclient groups.

a conflict which is basic to his *psychosocial* development.

Vocational-Educational Clients

In contrast, the VE client applies for counseling in order to facilitate his *vocational-educational* development, as revealed not only in his presenting problems but also in his personality characteristics. Factor I is again defined by the Sc and Gi scales, but in this group it has loadings by To and Wb rather than Ac and Py, as was the case for PA clients. Also, To and Wb join it with Factors III and IV instead of Factors II and IV, which means that VE clients associate the conscientiousness and cooperativeness of Factor I with non-judgmental social attitudes and feelings of euphoria, as these relate to autonomy (Factor IV) and conformity (Factor III) respectively, rather than Factor II attitudes and behaviors. Factor II is similar in composition for both types of clients, the difference being in its relationships to Factor I and IV, as Figure 1 shows. Factor III emerges as probably the most important one in the VE client personality, with its focus upon conformity as the preferred *modus operandus* for attaining a sense of well-being in both achievement and social situations. The VE client wants "to do the right thing"; he is concerned about making correct decisions; he seeks confirmation of his plans from others before he implements them; in short, he is what

might be called the *Cautious Committer*. Factors IV and V seem to be consistent with this portrayal of the VE client, who would see independent and rebellious traits as being related to impatience with delay, indecision and planful behavior.

The relationship of the VE client's problems to his personality is clarified by a consideration of the adjectives which raters have chosen to describe individuals who are high scorers on the Factor III scales—Cm, So and Ac. Among these the following adjectives tend to characterize clients who express more than the usual concern about their vocational plans and academic progress: conforming, conscientious, efficient, modest, responsible, self-denying, serious and tactful. If some of the adjectives for the Wb scale, such as enterprising, valuing work and versatile, are added to this list, it becomes increasingly apparent how the VE client's personality might affect his decision-making processes and achievement orientation. Basically conservative in his attitudes and values, yet motivated to achieve in work and study alike, he approaches choice and problem-solving situations deliberately but tentatively. He wants to explore each alternative course of action which is open to him; to anticipate what their probable consequences are; to consider possible contingency factors which may affect his plans or solutions; and, to delay in implementing them,

even after he has decided upon what he is going to do. Fearful of making mistakes and taking risks, anxious about the future and the uncertainties it holds, and lacking confidence in his ability to cope with his problems, the VE client comes for counseling in order to gain some structure in his life and to reassure himself that he is doing what he should be doing.

Clients vs. Nonclients

If the PA client can be characterized as the *Rebellious Intellectual* and the VE client as the *Cautious Committer*, then the nonclient can be considered as a rather close approximation to Heath's (1959) personality construct, the *Reasonable Adventurer*. In the first review of the CPI, this construct was inferred from a synthesis of factorial and other results on unselected Ss, which included clients as well as nonclients, but in the factor analysis of the NC group it is given an explicit definition based only upon Ss who have *not* applied for counseling. The personality structure of this group is similar to the others with respect to many of the scales which load upon one factor or another, such as Sc and Gi (Factor I), Do and Sa (Factor II), Cm (Factor III), etc., but it is notably different in the relationships which obtain between certain factors. In contrast to the PA clients, Factor IV for the NC group not only includes To but also is uncorrelated with Factors I and III. In other words, nonclients appear to have reconciled independent and self-reliant behavior (Ai) with non-judgmental attitudes and beliefs (To), and are able to adapt to social situations (Fx) in an efficient manner (Ie), without being beset by autonomy-conformity conflicts. Also, they apparently dissociate psychological-mindedness from their primary adjustment modes, as indicated by the low factor loadings of the Py scale, and possibly in this way they avoid getting overly immersed in the inner world of thought and consequently can cope more effectively with the outer world of reality.

Likewise, in comparison with the VE clients, the NC group has different configurations of factors and interrelated scales which would suggest a different orientation toward decision-making and problem-solving. In particular, Factor IV would seem to best represent the response tendencies of the nonclients. High scorers on the scales which comprise this factor have been described as: adventurous, clear-thinking, foresighted, humorous, independent, playful and resourceful. If the SP scale, which is correlated with both Factors IV and V, is also included, then such adjectives as clever, imaginative and quick would be added as well as an emphasis upon "self-confidence in personal and social interactions." Given these characteristics of the NC group, it is not likely that they experience the apprehensions and doubts which concern the VE clients in deciding upon a career or progressing with their higher education. Rather, the nonclients have many of the attributes

of the optimally functioning *Reasonable Adventurer*: "Future orientation, but in a sense of life as a game rather than life as a struggle"; "Formation and maintenance of close friendships among his peers"; "Tolerance of ambiguity. He could maintain a state of indecision until a basis for making the decision was at hand"; and, "A lively but benign sense of humor" (Heath, 1959, p. 5).

Profile Analyses of Client Personalities on the CPI

Whereas a factor analysis provides information about how several variables, such as the CPI scales, cluster together *within* a group, a profile analysis indicates what the differences are on the variables *between* groups. Usually, the differences are analyzed along either one or both of two dimensions of the profile: its overall elevation, which is defined as the mean of the scale scores; and, its shape, which refers to the configurations formed by connecting adjacent score points with straight lines. There are many different methods for analyzing profiles, some of which are considerably better than others. Among these, the Type I analysis of variance design (Lindquist, 1953), as applied to profiles by Block, Levine, and McNemar (1951), is probably the best and was the one used by Goodstein, Crites, Heilbrun, and Rempel (1961) in their comparison of PA clients, VE clients and nonclients on the CPI. The profiles for these groups are reproduced in Figure 2, along with their mean scores on each scale, and will be the frame of reference for the discussion of elevation and shape which follows.¹

Profile Elevation

The overall levels for the three groups were found to be significantly different, with the nonclients having the most elevated profile, the VE clients the next highest and the PA clients the lowest. On 12 of the 18 CPI scales, the NC group had significantly higher mean scores, particularly on Do, Sy, Sp and Sa, and no significantly low scores. The PA clients peaked on only one scale, Fx, but had low points on four scales—Wb, So, Ac and Sy. And, the VE clients scored highest on Cm, and lowest on Ie and Py. There were no significant differences between the groups on Cs and Re. On Sa all three groups were at least one-half standard deviation above the published norm for the CPI, and on Sc and Gi they were the same distance below the average. Thus, not only did the clients and nonclients differ among themselves but they also deviated from the norm toward lower scores on the scales which define Factor I. From these findings, at least two implications can be drawn: First, if profile elevation is interpreted as an index of general adjustment status, as is often

¹Due to space limitations, only the results on males are presented. With only a few exceptions, however, they are quite similar to those obtained for females.

PROFILE SHEET FOR THE *California Psychological Inventory: MALE*

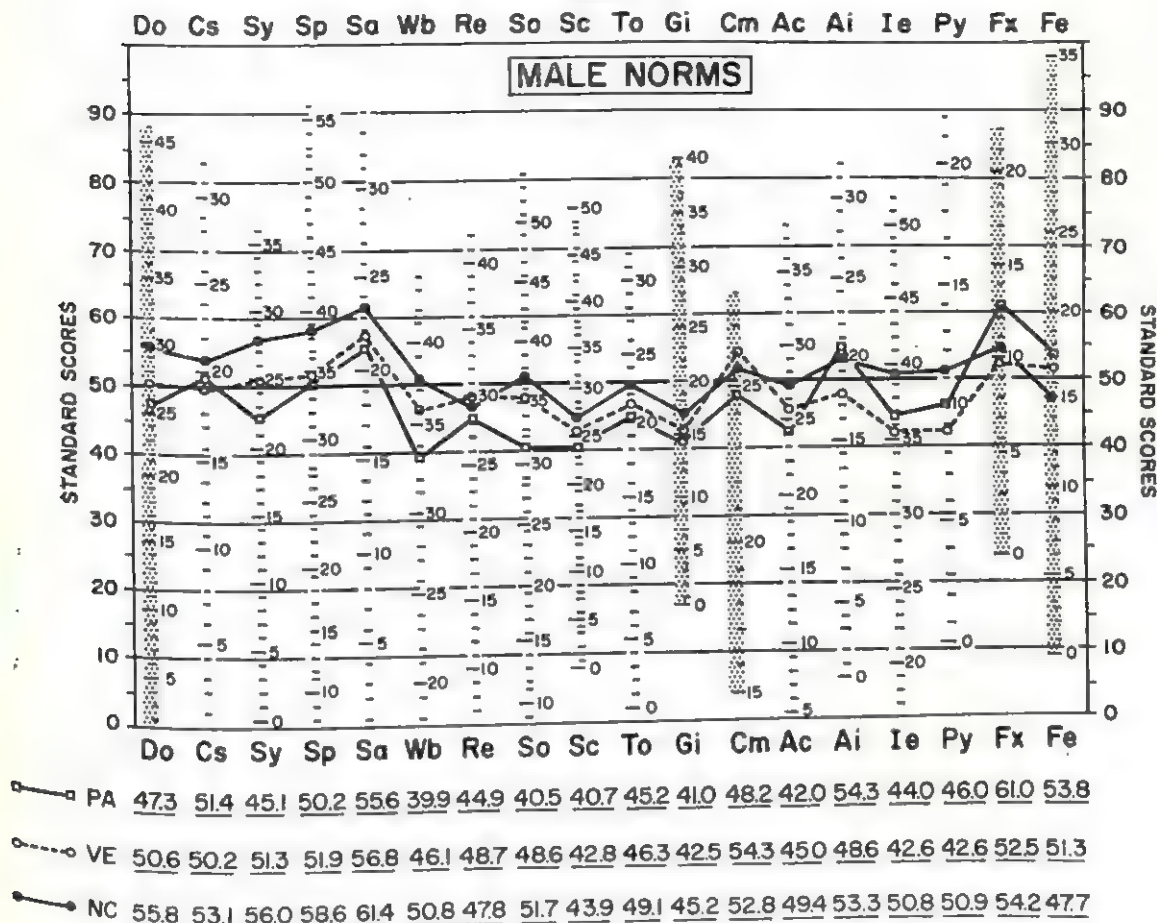


Fig. 2. Mean scores of the personal-adjustment (PA), vocational-educational (VE) and nonclient (NC) groups on the CPI scales and factorial dimensions (shaded scales).

the practice of counselors, then it is clear that the nonclients are the best adjusted and the PA clients the poorest adjusted, with the VE clients in between. And, second, it is equally apparent that none of these groups fits the prototype of the introverted, conforming, self-effacing personality.

Profile Shape

In the Type I analysis, differences between groups in profile shape are indicated by the interaction of scales with groups. If the overall interaction is significant, then further tests of pairs of scales can be made to identify the ones which are producing the differences in profile shape. This procedure was followed in the original study by Goodstein, et al. (1961), and, for the three client and nonclient groups on the 18 CPI scales, it yielded 145 significant interactions. Since such an array of data is practically incomprehensible much less interpretable, the interactions which are reviewed here are only those for the scales which

seem to best represent the factors in the CPI—Do, Gi, Cm, Fx and Fe. The interactions between the possible pairs of these scales, as shown in Figure 3, are all significant, which means graphically that the lines connecting the scores on the scales for the groups are *not* parallel. This condition can arise either when the lines are divergent, as is the case for the VE and NC groups on Do and Gi, or when the lines cross over each other, as is illustrated by the same two groups on Do and Cm. Thus, a divergent interaction means that one group scores relatively higher (or lower) than the other on one scale as compared with the other, whereas a cross-over interaction indicates that the groups reverse their scores on the two scales.

Because the NC group tended to score higher than the client groups on most of the CPI scales, whereas the latter had both some high and some low scores, as mentioned above, most of the interactions were of the cross-over type. Of these, the one which was most discriminating among the

groups was on the Cm and Fx scales, where each group changed its rank with respect to the other. That is, VE was higher than NC and PA on Cm but lower on Fx; NC was lower than VE but higher than PA on Cm and the opposite on Fx; and, PA was lower than VE and NC on Cm but higher on Fx. Similarly, the rankings of the groups, taken two at a time, were completely reordered on the Do-Fe and Gi-Fe scale pairs. In fact, the Fx and Fe scales in certain combinations with the other scales produced most of the interactions which differentiated the groups, as is brought out in Table 2. If a general conclusion were to be drawn from these scale patterns, it would be that they accentuate the differences among the clients and nonclients which were found when they were compared on each scale separately in the analysis of profile elevation. For example, VE clients scored somewhat higher than the other groups on Cm and lower on Fx, but not enough to attach much interpretative significance to the differences. When their scores on these scales are considered as a pattern, however, and are then compared with the patterns of the other groups, the differences assume much greater proportions empirically and hence are more meaningful theoretically.

Table 2
CPI Scale Patterns which Significantly
Differentiated
the Personal-Adjustment (PA) Clients,
Vocational-Educational (VE) Clients
and Nonclients (NC)

PA vs. VE
high Fx—low Gi
high Fx—low Cm
high Fe—low Cm
PA vs. NC
high Fx—low Do
high Fx—low Gi
high Fx—low Cm
high Fe—low Gi
high Fe—low Cm
VE vs. NC
high Cm—low Do
high Cm—low Fx
high Fe—low Fx
PA and VE vs. NC
low Fe—high Do

Summary of Client Personalities as
Measured by the CPI

It should be emphasized that any composite descriptions of clients which are extrapolated from one factor analysis and one profile analysis of the CPI, based upon Ss at one university counseling center, are necessarily tentative and subject to further confirmation. Thus, the summaries of client personalities which follow are to be considered

only as hypothetical constructs which may have some heuristic value in counseling or research and not as established norms:

1. The PA client closely resembles what might be called the *Rebellious Intellectual*. He is bright and insightful and resourceful but also discontented and impulsive and withdrawn. He tends to be less well-adjusted than others both personally and socially. He is analytical and intrceptive and questioning, on the one hand, but egoistic and pleasure-seeking and sarcastic, on the other. He places a high value upon individual rights and liberties, but is demanding and manipulative of others. He has a strong need for affection but can neither receive nor give love without embarrassment and self-consciousness. He suffers from conflicting tendencies to be autonomous and independent and self-reliant, on the one hand, and to be conforming and dependent and passive, on the other. He is appreciative and idealistic and sympathetic, but by the same token is cynical and hostile and resentful. In short, he is an enigma—a myriad of contradictory attitudes and moods and values, most of which find expression, in one form or another, in the particular kinds of psychosocial problems he brings to counseling.

2. In contrast, the VE client can be characterized as the *Cautious Committer*, whose behavior is consistent and predictable and stable. He moves deliberately and tentatively in decision-making and problem-solving, even to the point of indecisiveness and sometimes prolonged inaction. He has a low tolerance for ambiguity and avoids taking risks as much as possible. He seeks structure in his daily living and planning for the future, and, when he finds it, he is dependent upon it. He seldom questions rules and regulations, although he may unconsciously resent them. He conforms in adjusting to life and its problems by making the expected response, the modal response. He is submissive and compliant before authority. He is conventional and stereotyped in his thinking, which may also be somewhat confused, and he lacks insight into his motives and those of others. At his best, he is conscientious and industrious and obliging; at his worst, he is anxious and inhibited and slow. It is not surprising, therefore, that he comes for counseling when he is under pressure to declare himself vocationally or to achieve educationally, since he lacks the confidence in his ability to cope effectively with such problems on his own that is necessary for further vocational and educational development.

3. Finally, the nonclient has been identified as the *Reasonable Adventurer* (Heath, 1959). He is free of the autonomy-conformity conflicts of the PA client, which he has resolved through developing a tolerance for different points-of-view while maintaining his own nondogmatically, and he is able to make decisions effectively and realistically, without the inhibiting doubts and misgivings of the VE client. Moreover, the nonclient is confident and enterprising and resourceful. He is a potential

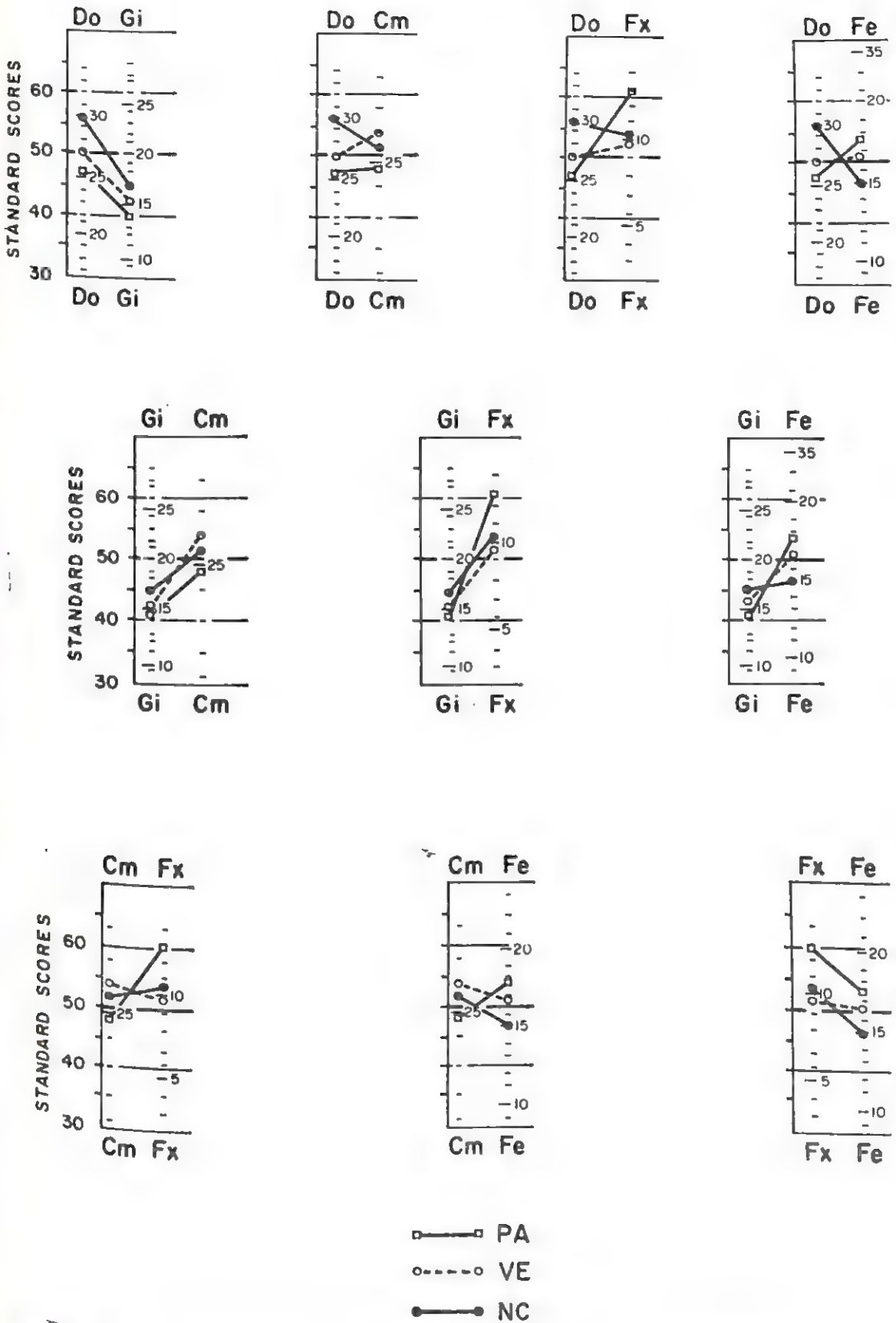


Fig. 3. CPI scale interactions for the personal-adjustment (PA), vocational-educational (VE) and nonclient (NC) groups on the factor dimensions.

leader who controls and directs the activities of others but who also respects their opinions and rights. He possesses self-confidence and self-respect, and he participates in life optimistically and wholeheartedly. He assumes personal responsibility for the consequences of his actions and social responsibility for the welfare of others. He is the healthy or mature personality. Many counselors would consider him the ideal for their clients who fall short of his equanimity and perspicacity.

One final consideration about these descriptions should be noted. They represent the prototypic client or nonclient, *not* all clients or nonclients. As college counselors know, and as others will recognize, there are PA clients who tend to be more cautious and dependent than they are rebellious and intellectual, and, conversely, there are VE clients who tend to be more aggressive and independent than they are deliberate and reliant. Similarly, there are nonclients who resemble PA or VE clients more than they do the typical nonclient. The implication is that, in the analysis of

individual CPI profiles, variations from as well as similarities to the client and nonclient prototypes may be significant and should be interpreted.

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Book Reviews

Comments on Current Books and the Passing Scene

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Last June, Chicago's National Opinion Research Center reported on changes in prestige ranking of occupations since 1947. The top in status was still Supreme Court Justices and physicians continued to occupy second place. The greatest upward shift was recorded for nuclear physicists who rose from fifteenth place in 1947 to third in 1964. Bankers plummeted from tenth to twenty-fourth and ministers dropped from twelfth to seventeenth. Diplomats slid from fourth to tenth position. The changed rankings undoubtedly reflect what has been going on in the world since 1947, and many young persons will very likely be influenced in choosing a career by what prestige is associated with a particular job. Yet the thoughtful person will ponder the observations made by Robert M. Hutchins in a column he wrote for the *Los Angeles Times* a few months ago. He noted that the automated industrial system we are achieving will have to have extremely competent scientists, engineers, technicians and the like. These are prestigious occupations but they will be relatively few in number when all prospective jobs are considered. What, then, will the computerized plant labor force look like?

Dr. Hutchins thinks that Bahlens's Bakery in West Germany, said to be the most modern in the world, gives us a pretty good idea. Each enormous automatic oven is under the care of four Spanish women who do not know German. Their job is to press a button if anything goes wrong. Bahlens installed some of their ovens in England but they didn't work properly. The British master bakers knew more about baking than the machines; so they adjusted them. Bahlens sent over a German woman and two uneducated Spanish females who chased out the experienced bakers and then the ovens worked perfectly. Bahlens's director, Kurt Pentzlin, is quoted as remarking, "Skill can be a handicap to success."

The nub of the looming social problem, as your Column Editor sees it, is in that last sentence. Automation is now invading the skilled jobs and skill can be a handicap to the new, automatized order of things. Previously, it was the simple jobs which were eliminated by machines. Now the skilled trades and the white collar jobs are under the guns. It all means a tremendous social dislocation. To cope with the problem the tenta-

tive, first steps we are now taking will probably be vastly extended. Retirement will be earlier for many workers, vacations longer, the work week shorter and there will be youth programs for the young plus golden-year programs for the aged. Brutally put, these will be the superfluous human beings in our forthcoming robotized society. In a decade or two they will represent about half the population. The other half will be the essential persons, those who can manage our new technology, devise and maintain the new machines and otherwise serve the new culture. They will work to support the other half. It appears that we are shaping a two-class society composed of the essential and the superfluous citizens. Inherent in such a state is the possibility of class strife, unless—unless we can utilize the limitless potential of education. In America, education has provided the answer to our myriad problems of the past. There is no reason to doubt that it could not do so in the future. It could mean a true golden age for man. As Dr. Hutchins notes, one job that will not be automated out of existence is the job of being a human being; so our job is to figure out how to build an educational system to prepare us for this task. Dr. Hutchins is quite right, of course, and your Column Editor would add that counselors will play a central role in the system we shall have to build.

Death comes to all mankind; yet it is a topic that has been largely avoided by serious students. See the review of *Taboo Topics* in the Spring, 1964 issue of the *Journal of Counseling Psychology*. In our society it is all right to refer to death obliquely in polite society or by means of euphemisms such as "passed on," "crossed the great divide," "departed," etc. Under other circumstances or in other social strata one can joke about it or indulge in vulgar figures of speech. Wartime humor was notoriously grisly, as in the famous World War II cartoon of a queue of soldiers in front of a battlefield first aid station where one of the men waiting in line had a shell entirely through his head. But let one attempt to open an objective discussion of the meaning of death and he will be made to feel as if he walked into the wrong room of a hotel. One of the few attempts to deal professionally with the subject of death is to be found in the recently published

Counseling the Dying (Nelson, New York, 1964) by Magaretta Bowers, Edgar N. Jackson, James A. Knight and Lawrence LeShan. Dr. Bowers is a psychoanalyst, Dr. Jackson is a Methodist minister, Dr. Knight is both a psychiatrist and a clergyman and Dr. LeShan is a clinical psychologist. Thus the authors are unusually well qualified by training and experience to treat this neglected area of man's existence, namely, its termination. Significantly, your Column Editor felt uncomfortable when reading the book and even more so when, after some vacillation, he began writing the review. Yet death is a topic from which we counselors have too long averted our eyes. Sex was such a topic in pre-World War I days until the writings of Freud led us to face such natural phenomena squarely. Perhaps *Counseling the Dying* will lead to a similar breakthrough in facing another natural phenomenon.

The authors begin by noting that dying is an intensely private affair. By contrast, birth is a social act for no one is born alone. Furthermore, much has been written about birth and all its stages and phases, including such facets as easy and difficult births. Nothing comparable exists in the professional literature about easy or difficult dying. Indeed, very little at all has been published in the professional literature about the act of dying and its meaning for the individual. There is a vast religious literature about life after death and there is a vast medical literature about preserving life. But such writings have a kind of technician's approach and never seem to grapple with the meaning of death for the individual except in a technician's terms. That is, many religious writings represent a specialized kind of cost accounting in qualifying for the hereafter. While alive, the person did this and got so many demerits but he also did this and earned so many credits. The great ledger is balanced like a Girl Scout's book of Brownie points. The physician views death as an enemy who can be held at bay but never conquered but he, too, functions essentially as a technician, although a high-priced one. He prescribes this pill, injects that drug, slices away this tissue—all with the aim of keeping the patient alive. But when the patient dies, and eventually every patient does, the meaning for the physician is essentially a technical one and likely to be cast in the form of questions such as, "Did I do all I could? What vital organs failed? Would another treatment have worked better?" etc. The meaning of dying for the patient himself is a thing apart.

The authors note that there is a conspiracy of silence that surrounds the dying, and the patient *in extremis* is unconsciously separated from the human interchange that could give him support. Even professional persons who are closest to the dying patient unconsciously shrink from contact with him. A study by LeShan, for example, revealed that nurses hurried to the hospital rooms

of patients who were not near death but were consistently slow in answering a summons from patients known to be at death's door. It was all quite unconscious, of course, and probably an expression of the common aversion to death. In similar vein one physician has expressed the principle that communications within and without the dying person are shut off. The authors take sharp exception to this assertion, noting that physicians may *want* to believe in such communication curtailment in order to evade an unwanted relationship.

The counselor of the dying is working against time and in the context of highly individual circumstances. The time factor is at once apparent but the individual circumstances are but dimly grasped. The counselor is trying to keep himself aware of the needs of the patient and at the same time he must not over-identify himself with the patient if he is to preserve his own adjustment. The dying patient will display varying ability to communicate, depending in part on how he is closing his life. The cancer patient often cannot talk about his disease because his disease is not socially acceptable while the victim of a heart attack will talk freely of his condition since it is clean and acceptable in his thinking. Then there are the special circumstances of the counseling relationship. As the authors point out, there are really three persons in the room: the client, the counselor and the Grim Reaper. The counselor may be so aware of the pressure of time due to the presence of the third party that an interference with the normal process and progress of therapy may develop. Furthermore, he is conscious of the terminal character of his professional efforts. In counseling a young person, by contrast, the counselor can reasonably expect that, if successful, his activities will yield a harvest of good for many years. Successful counseling with the dying provides only the satisfaction of knowing that a human being has found the meaning of his life before departing it. When the significance of this is understood by the counselor, there are probably few professional satisfactions that surpass it. Every human being has some burden of fear and guilt and, as the certainty of death becomes evident, the stress of anxiety may become overwhelming. The counselor can help relieve the patient from this burden. To do so, the counselor cannot let his own fear of death permit him to shrink from a close verbal interchange with the patient nor may he take refuge in ritualized expressions that do not meet the needs of the patient. The dying person needs free emotional expression and it is this opportunity for free expression that the counselor can provide.

Counseling the Dying is obviously an unusual book and there isn't anything now available with which it can be fairly compared. It offers much common sense and sound psychology for the professional counselor. Also it covers an area of counseling activity that has been sadly neglected until

now. Eventually the subject matter of the book will be part of the training of every counselor.

Quite a different book yet somehow kindred in spirit is *The Broken Image* by Floyd W. Matson (George Braziller, New York, 1964). The blurb on the dust jacket notes that the book deals with "... the alienation and manipulation of man in the great social machine to the dramatic search for human meaning and freedom in contemporary thought and therapy." It does just that and it is solid food for counseling psychologists. For some time now this column has emphasized that counselors deal with individuals and in man's struggle to preserve his identity, his *individuality*, counselors will be right in the thick of things. Matson's book spells out the problem of man in a mass of men. His focus is on how man understands himself—man's image of man. To accomplish this, the author examines modern science in all its major branches and also contemporary philosophy. Man has somehow become fragmented, fractured on the anvil of the science that emerged from Newtonian physics and its mechanistic model. The biological and social sciences have sliced man into convenient areas for study and in the process have lost the whole man. In recent decades it has become clear that the mechanistic conception is inadequate as the new physics of uncertainty emphasizes. As a result, the author feels it is about time that the broken image of man be mended. In the process of mending man's image, the author fractures the sciences of man. How can we understand behavior in strictly behavioral terms, he inquires, without knowing the meanings of the behavior?

As a venture in scholarship and as an example of careful organization, *The Broken Image* is simply tremendous and erudite in the broadest sense. Author Matson has digested a prodigious amount of material and prepared a most unusual book. He is rather harsh in his handling of the behavioral scientists, especially Watson, Hull and Skinner. But in order to make his point, Matson obviously feels he must be emphatic and certainly he is in no mood to compromise. No one can argue with his insistence on the absolute necessity for man's freedom to be human. One can argue, however, that concepts of behavioral science have sometimes been overstated and at times misstated; hence in this reviewer's opinion, there is the likelihood of eventual rapprochement in differing views of man's study of man. In a way Matson has trumpeted his case, just as behavioral scientists trumpeted theirs. He does a beautiful job of writing—style, organization and vividness of expression are worthy of being used as models. Periodically, when your Column Editor is weary of leaden phrases or sated with researches on a thin slice of man or fed up with being manipulated by Madison Avenue he is going to pick up *The Broken Image* and reread portions of it as a tonic and an antidote.

And now for a few professional *hors d'oeuvres*. W. Leslie Barnette, Jr. has edited a paperback *Readings in Psychological Tests and Measurements* (Dorsey Press, Homewood, Ill., 1964) and he has really worked at editing his selection of articles. He has abbreviated most of the studies and cast aside the more technical jargon as well as all but the most simple statistics. His purpose in so doing was to make the collection palatable and comprehensible to the undergraduate student. In this he has succeeded admirably. The book has eleven sections beginning with General Measurement Problems and closing with Critiques of Testing. Each section and every article has a stage-setting introductory statement to ease the reader into the material he is about to confront. Editor Barnette makes no pretense of concentrating on current articles. Most are recent but some go back nearly twenty years. They all have one thing in common—each has a point to make. All in all, Barnette has done a good job in editing a book focussed on the undergraduate but equally good for the graduate student or, for that matter, for anyone who wants a solid brush-up on tests and measurements.

Another paperback is *Occupational Information in Counseling* by Barbara A. Kirk and Marjorie E. Michels (Consulting Psychologists Press, no city listed, 1964). The emphasis is on the use of occupational information in counseling, and the authors hew effectively to the line. They recognize the importance of personal characteristics in making a vocational choice but they see their task as concentrating on the *vocational* factors of job opportunities, requirements, rewards, hazards, etc. Thus they concentrate on the broad principles and techniques of vocational counseling, then illustrate them with nine well-defined case reports, next go into classifying occupational information in order to make it useful for counseling, and finally present the complete plan followed by an index and short bibliography. The plan is good and the book is useful.

Also in paperback is Glenn L. Gardiner's *How to Get the Job You Want* (Barnes & Noble, New York, 1964). It is a reprint of an earlier version published by Harpers. The book is intended for the job seeker, not the professional counselor. But it is a practical approach to getting and keeping a job. It is suitable for counselees of any age and almost any level of training.

In the Foreword to *Philosophical Foundations of Guidance* by Carlton E. Beck (Prentice-Hall, Englewood Cliffs, N.J., 1963), Dugald Arbuckle points out that the book is unusual "... in that it is the first to trace historically what the author considers to be the philosophical foundations of the guidance movement." The book has an occasional apologetic note and a heavy quality in its presentation that is reminiscent of German philosophic writings. Yet, for all that, it is an important venture in a hitherto unexplored realm.

Without thinking too much about it, most of us have been content to point to Frank Parsons as the founder of the guidance movement fifty plus years ago. Yet we know full well that nothing in the realm of ideas and practice arrives without antecedents. Such things evolve and emerge and there is always a history. For the counselor-scholar Beck's book is a good bet to whet the appetite for an examination of the philosophical roots of guidance.

Edward C. Roeber. *The School Counselor*. Washington, D.C.: The Center for Applied Research in Education, 1963.

Roeber was invited to write *The School Counselor* as one of one hundred matched volumes "constituting a coherent and concise presentation of the entire profession of education"; therefore, no ax is ground in this book. Roeber's contribution lacks the zeal of a biased writer but rather accomplishes his intended task in an objective scholarly fashion. Virtually every statement that is made, other than the author's organization, clarifying and objective interpretive material, is backed by one or more research works which are cited. Of the 94 pages of the body of the book, only 10 do not contain footnotes. It therefore provides an excellent source of references to relevant research as well as a succinct factual description of the origin, present condition and projected future of that nebulous creature, "The School Counselor."

Roeber presents a good behavioral analysis of the duties performed by school counselors according to actual research findings as well as studies regarding role concepts of counselors, students, administrators, teachers, parents, etc. While Roeber is in accord with most counselors in their reaction against non-professional duties, he sees their duties as extending beyond talking with pupils, parents and teachers to include the study of pupils in their environments, program development and personal development. Findings that 70 per cent of practicing school counselors were not required to do a research study anywhere along their educational ladder, of course, militate against their performing a research function.

The author gives a comprehensive account of present and projected graduate curricula for the preparation of school counselors and advocates more supervised practicum work as well as research orientation. He does not deal adequately with the common problem of requiring school counselors to hold a teaching certificate before going into a graduate program in school counseling. This requirement shuts the door to this vital neo-profession to countless liberal arts graduates in the behavioral sciences who would be good school counselor timber in the opinion of this reviewer.

All in all, Roeber's *The School Counselor*, packs about as much soundly based information in a book of less than 100 pages as is possible at this time. For that reason, it is well worth the time of student, practitioner and professor alike.

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Angelo V. Boy & Gerald J. Pine. *Client-Centered Counseling in the Secondary Schools*. Boston: Houghton Mifflin, 1963.

This book should be evaluated somewhat independently along three dimensions: (1) the role of the professional counselor in a school setting, (2) client-centered philosophy, (3) client-centered practice. The greatest contribution made by Boy and Pine is along the first dimension which adequately covers not only the case for counselors who operate in a professional role to the exclusion of other roles, ranging from assistant principal to assistant clerk typist, but also offers constructive guidelines for the creation and implementation of a proper counselor image. The other contribution of this book is the demonstration of the fact that the client-centered approach was actually applied to the hilt in at least one junior high school. This is a strength from the standpoint of the client-centered orientation but, in the reviewer's opinion, it makes the book less applicable to secondary schools in general.

Boy and Pine see three distinct positions under a Director of Pupil Personnel Services. These are the psychometrist, the guidance worker for vocational and educational guidance, and the counselor who deals with more personal problems. The master's curriculum should reflect the requirements of these occupations.

Chapter 3 provides a clear and concise capsule summary of Rogers' philosophy; but from the standpoint of both theory and practice, it does not carry the reader beyond the orthodoxy of Rogers' 1951 *Client-Centered Therapy*. Of the ideal characteristics claimed for the client-centered counselor, the one that falls flattest in the excerpts given is genuineness. In a typescript including 30 counselor responses, 29 were pure reflection of what the client had just said even to the point of using the client's own pronoun, for example: Cl: "Now it feels like I have confidence! Everybody has seen the improvement!" Co: "I'm kind of excited about myself and the improvement I've made." The only thought advanced by the Co during the entire interview was, "Our time seems to be drawing to a close . . . whether or not you come back is once again up to you." While the Rogerian philosophy is nothing short if beautiful and is as refreshing as a warm spring shower, counseling interchanges such as this are artificial,

stilted and anything but genuine. It is technique centered rather than client centered and the technique itself does not follow from the philosophy.

While Boy and Pine do give some tests, apparently the client would have to endure quite a bit of negative reinforcement in order to have the opportunity to take tests. The authors write, "If the client were to say, 'Do you have any tests which will tell someone what he is best suited for?' the counselor, instead of answering affirmatively and listing all the available tests, might react in this way, 'I'm wondering about my future and would like to get a picture of my abilities.'" (Note in this response that the counselor has so deeply internalized the client's frame of reference that he identifies with the client through the use of 'I'.)

To quote further, "If a client expresses a strong desire to be tested, if he feels secure enough to look at test data, if the counselor has accepted and reflected feelings regarding tests and if the request is not characterized by affective components, the counselor goes along with the client's request." (Italics mine.) This technique not only seems non nondirective but the "deeply internalized use of the pronoun 'I'" strikes this reviewer as distinctly lacking in genuineness.

One chapter is devoted to the weaknesses of tests somewhat along the lines of Hillel Black. While this reviewer cannot say that the information given on the weaknesses of tests is incorrect, the advantages were neglected. This reviewer also wonders why the authors felt the need to go into the detail they did regarding the meaning of correlation coefficients, coefficients of alienation, etc.

This book is a good reaction against the concept of the counselor as simply a program juggler, test administrator, disciplinarian or occupational information teacher. It is highly recommended for stimulating controversial supplementary reading in introductory guidance or counseling courses and would logically follow Rogers' basic text.

The last chapter (which should have been first) by Dugald Arbuckle is a comprehensive summary of the current status of the field of school counseling as a profession. All chapters have good discussion questions for students at the end.

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Manuscripts Accepted for Publication

Attitudes toward Career and Marriage and the Development of Life Style in Young Women. Esther Matthews and David V. Tiedeman, Harvard University. 8-6-62.

The Relationship of Stimulus-Structure and Selected Personality Variables to the Discomfort-Relief Quotient in Autobiographies. Harry J. Caughren, Jr., Oakland City College, Oakland, California. 12-17-63.

Effect of Planned Reinforcement Counseling on Client Decision-Making Behavior. T. Antoinette Ryan, Oregon State University and John D. Krumboltz, Stanford University. 12-18-63.

Ideology and Counselor Encapsulation. Milton Schwebel, New York University. 12-20-63.

The Relation of Personality Needs to Vocational Counseling Outcome. Donald A. Pool, University of Texas Southwestern Medical School. 1-6-64.

Prediction of Persistence in College. Dale J. Prediger, University of Toledo. 1-6-64.

Occupational Interests, Social Values, and Social Character. Waltraud M. Kassarian, Los Angeles, California and Harold H. Kassarian, University of California, Los Angeles. 1-10-64.

A Cross-Sectional and Longitudinal Study of Scholastic Abilities over Twenty-Five Years. David P. Campbell, University of Minnesota. 1-22-64.

Perceived Parental Attitudes and Parental Identification in Relation to Field of Vocational Choice. Richard J. Brunkan, Marquette University, Milwaukee, Wisconsin. 1-24-64.

Characteristics of Male University Students with Weak Occupational Similarity on the Strong Vocational Interest Blank. Donald G. Zytowski, Washington University, St. Louis, Missouri. 2-3-64.

The Influence of Tape Recording on Counseling. Ralph R. Roberts, Jr., University of Pittsburgh and Guy A. Renzaglia, Southern Illinois University. 2-3-64.

A Note on Self-Ideal Discrepancy and Self-Acceptance. Pearl Schroeder, University of Illinois. 2-14-64.

Predicting Success of Schizophrenics in Industrial Therapy. Ronald E. Ritchey, Tomah V.A. Hospital, Wisconsin. 2-20-64.

Client and Therapist Transparency in the Psychotherapeutic Encounter. Charles B. Truax and Robert R. Carkhuff, University of Kentucky. 2-27-64.

The Effect of Behavioral Counseling in Group and Individual Settings on Information-Seeking Behavior. John D. Krumboltz and Carl E. Thoresen, Stanford University. 2-27-64.

Counselors and Girls. Edward C. Lewis, Iowa State University. 3-2-64.

Predicting Success on a Psychiatric Rehabilitation Program. James F. McCourt, V.A. Hospital, Brockton, Massachusetts. 3-13-64.

Counselor Isolation and Some Concomitant Perceptions. Robert M. Wasson, State University of Iowa and R. Wray Strowig, University of Wisconsin. 3-16-64.

The Clinical-Counseling Dilemma. Wayne P. Anderson, University of Missouri. 4-8-64.

Receptive Communication in Psychiatric Nurse Supervision. Peter E. Nathan, Janice Marland, and Ogden R. Lindsley, Harvard Medical School and Massachusetts Mental Health Center. 4-16-64.

From Ephemeria. Joann Chenault, University of Pittsburgh. 4-22-64.

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Results From the Questionnaire

The return from the Summer issue questionnaire was good in light of its mailing late in May. While the great majority of subscribers did *not* reply, the replies from 388 private and 159 institutional subscribers are much appreciated. This return has helped the Journal Board in making a decision about providing abstract cards.

The idea of abstract cards was originally suggested by Don Super who had observed their use in Europe. The idea seemed useful, but the demand for such a service was not known—hence the questionnaire survey. The results are reported below not only because our readers will be interested, but also because several editors have expressed an interest in the findings. Since we expected private subscribers to be most interested in abstract cards, we asked each respondent to indicate his type of subscription, but the cards coming in from institutional subscriptions showed comparable results. After an introductory explanation, the questionnaire asked these multiple-choice questions:

1. My use of cards:	(a) none	(b) some	(c) frequently	(d) all cards
Private subscriber	11%	27%	42%	20%
Institutional subscriber	19%	22%	38%	21%
2. Value of cards:	(a) better to add pages	(b) equal to add pages	(c) better to have cards	
Private subscriber	28%	13%	59%	
Institutional subscriber	27%	13%	60%	

Questionnaire returns are helpful, but not always easy to interpret. Those most interested or opposed probably tend to respond, but the results do indicate a widespread interest in having cards and also a strong minority who have little use for cards. The Board of Directors of the *Journal* has decided to provide abstract cards for the next volume (#12) and so give the idea a good tryout. Further, because an increasing number of excellent papers are being submitted as our field grows, the Board also authorized an increase of 32 pages for the forthcoming volume. Readers will be pleased to know that both benefits come *at no increase in subscription rates*. The Board policy has always been to improve the *Journal* as permitted by increased numbers of subscriptions.

The questionnaire also included two other questions about *Journal* content and also asked for comments. Since private and institutional answers are practically identical, only the totals are summarized here. One question asked readers how they reacted to the occasional case studies which illustrated particular theoretical points. The response was: (a) omit, 11%; (b) present practice, 52%; and (c) more, 37%. A fourth question asked reader response to our occasional practice of having knowledgeable persons invited to write short comments on particular articles at the time they are published. The response here was (a) use less, 7%; (b) present practice, 58%; and (c) use more, 35%. In both instances present practice seems preferred, but the results are helpful in confirming present procedures.

The questionnaire also asked for additional comments and many responded (53% of private and 44% of institutional subscribers). These comments were most helpful and appreciated. Because the comments were quite varied, they are difficult to summarize here. Many elaborated on their votes. Others commented on types of articles particularly liked or disliked. However, here the number that voted one way or the other unfortunately tended to be about the same, e.g. more theory vs. less theory. Nonetheless, the nature of these comments (in some instances letters) has been most helpful. Thanks for your help; we hope you will enjoy the increased benefits.

Effect of Planned Reinforcement Counseling on Client Decision-Making Behavior¹

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The purpose of the study was to test the hypothesis that frequency with which clients make decision and deliberation responses increases with selective counselor reinforcement of these responses. Ss were 60 male students enrolled in a psychology course, assigned randomly to two counselors and three treatment groups: (1) decision responses reinforced; (2) deliberation responses reinforced; (3) decision and deliberation responses nonreinforced. One twenty-minute semi-structured counseling interview, divided into operant, treatment and extinction periods, was held with each S. Findings confirmed the hypothesis. Counselor reinforcement of decision and deliberation responses increased significantly frequencies of reinforced responses. Generalization of decision-making behavior to non-counseling setting was found.

One of the major goals of guidance is the development of clients' decision-making behavior (Gelatt, 1962; Rothney, 1958). For many clients the counseling process is aimed at helping them achieve more realistic choice-making based on consideration of relevant information, weighing of alternatives and selection of their final goal in terms of the greatest probability of success for attaining values held by the individual client.

As clients engage in their decision-making process there are at least two kinds of statements that can be distinguished: (1) *deliberation statements* which involve a tentative weighing of alternatives, and (2) *decision statements* which involve conclusions that have been reached in the past,

alternatives that have been rejected or decisions that have been reached during the counseling interview. Some clients perpetually are undecided, weighing the alternatives indefinitely, and never arriving at any decision. One of their problems is the inability to make a decision even after weighing the evidence relating to each possible alternative. On the other hand, some clients jump to decisions quickly without giving consideration to alternative courses of action or even to relevant facts which may affect the decision they have reached.

While it might take more than the wisdom of Solomon to know when a client has deliberated sufficiently about the relevant facts and alternatives to justify making a decision, it would be valuable to know whether or not the counselor had the power to influence the client's efforts to make either deliberation-type statements or decision-type statements. The purpose of the present study was to determine whether or

¹This research is based in part on the Ph.D. dissertation of T. Antoinette Ryan at Stanford University. John D. Krumboltz was chairman of the dissertation committee. The authors acknowledge their indebtedness to Frederick J. McDonald and Nathan Maccoby, members of the dissertation committee, for their constructive suggestions.

not a counselor can influence the relative frequency of deliberation and decision responses and whether or not such an influence generalizes outside the counseling interview.

Verbal reinforcement already has been shown to be effective in influencing behaviors ranging from the frequency of plural nouns (Greenspoon, 1955) to the length of time an interviewee speaks before stopping (Matarazzo, 1963). Verbal reinforcement was the primary means used in the present study to influence the relative number of deliberation versus decision responses made by each client.

Method

Sample

Sixty college students comprised the sample for this study. Subjects were drawn from the male population of students enrolled in a lower division psychology course at Sacramento City College during the Fall Semester, 1962.

Treatment

The psychology course in which Ss were enrolled provided for student-counselor conferences. These counseling sessions were used for the planned reinforcement counseling. The counseling interviews were held in the counseling center, in the offices to which students regularly reported for counseling interviews. One semi-structured interview approximately 20 minutes in length was held with each client. Three types of interviewing procedure were defined and Ss were assigned randomly to the three treatment conditions: (1) decision group, in which Ss were reinforced for decision responses relating to educational and vocational planning; (2) deliberation group, in which Ss were reinforced for deliberation responses relating to educational and vocational planning; and (3) control group, in which Ss were not reinforced for either deliberation or decision responses. Ss in each treatment were assigned randomly to two counselors.

A *decision response* was defined as a verbal statement by the client which indicated that he had decided on a course of action, had selected a

goal, or had eliminated an alternative with regard to his educational or vocational plans. Decision responses included expressions of verbal intention to act at a future date as well as reports of decisions made or actions taken at a prior time. Some examples of decision responses are as follows: "I joined the service." "I am spending more time studying now." "I decided to get math out of the way."

A *deliberation response* was defined as a verbal statement by the client in which he weighed alternatives, considered possibilities or deliberated about outcomes in terms of his probability of success with reference to educational or vocational planning. Examples of deliberation responses are as follows: "I want to look over the general overall requirements before I plan my course." "I don't know if two years in service will work against me or not." "If I don't major in accounting, maybe I can get into a course in automation."

Many responses could not be classified as either decision responses or deliberation responses and, hence, were designated as *other responses*. An other response was one which lacked a stated or implied reference to deliberating or deciding about educational or vocational plans, lacked clarity or preciseness in referring to goal selecting behavior, or referred to topics which were unrelated to educational or vocational plans. Examples of other responses are as follows: "Adolescence is just something you go through." "Those men were really scholars and gentlemen." "I like to watch TV."

Prior to the experiment each of two counselors classified responses from 12 tape recorded interviews into the three categories. By correlating the number of responses of each type as judged by each of two independent raters, a coding reliability of .90 was obtained for decision responses, .88 for deliberation responses, and .81 for other responses.

The interview was divided into five periods. The opening and closing periods were not timed exactly. The operant, treatment and extinction periods were timed precisely, by use of an automatic timer with bell attachment. At the close of the opening period, counselor turned a switch which started the pre-set timer. A muted bell sounded at the end of operant, treatment and extinction periods. It is suggested that the use of the timer did not have the effect of making the interview unrealistic, since students were accustomed to timers and the sound of bells in the counseling setting. None of the clients commented about the

bell. Neither counselor observed any apparent effect on clients as a result of the timer.

The five periods of the interview were as follows: (1) *Opening*. About two minutes. Counselors made introductory remarks, concluding with the following statement of instructions: "You are enrolled in Psychology 51, aren't you? (Yes) As you probably know, this course was planned to include individual conferences. The course outline provides that each student in the class may have some time devoted to individual counseling. We've arranged to have your counseling interview this morning (afternoon). The session will take about 20 minutes. OK?"

"The counseling interviews are for two purposes. First, we want to give some attention to you to help you in defining your future plans. Second, we want to get a general idea of the problems and ideas that fellows like you are considering, so that we may improve the counseling services for our students. We want to get a general idea of the educational and vocational plans and decisions that fellows like you have made and are considering. In order to help us get the general picture, we will use a tape recorder, but don't worry about your thoughts being made public. We won't use your name at all. What we are interested in is the general picture of the way fellows think about school, the kinds of ideas that they are considering and the decisions they have made.

"During the interview I would like to have you do most of the talking. If you will express your ideas and your thoughts, then, at the end of the interview I will try to answer any questions you may have.

"Will you please talk to me quite freely for the next 15 minutes? Tell me about the educational and vocational ideas you may be considering and the decisions you may have made. OK?"

(2) *Operant*. Three minutes. Counselors gave cues in the form of questions designed to encourage both decision and deliberation responses. Examples of cue questions are as follows: "What ideas have you been considering and what decisions have you made with regard to your vocational goal?" "Since you first started thinking about developing an educational plan, what sort of things have you considered and what kind of educational planning have you done?" "What have you done in the way of thinking or acting that would lead you toward your goal?" Clients made responses. No reinforcement was given for decision or deliberation responses.

(3) *Treatment*. Six minutes. Counselors gave cues. Clients made responses. Counselors reinforced appropriate decision and deliberation responses, according to the treatment group to which Ss were assigned.

The verbal reinforcement was given by the counselor immediately following the selected response for the client. It was expected that the reinforcement would follow an intermittent schedule because of the nature of the counseling interview setting (Krasner, 1962). In previous studies it has been found that about 70 to 80 per cent of reinforceable responses actually would be reinforced by the counselor. Reinforcers consisted of such verbal expressions as "Good," "Fine," "That's a good idea," or any other verbal or non-verbal sign of approval by the counselor.

(4) *Extinction*. Six minutes. Counselor gave cues. Clients made responses. No reinforcement was given for decision or deliberation responses.

(5) *Closing*. About three minutes. Verbal awareness test and interview closing.

Awareness Test

In closing the interview, each counselor asked the following three questions:

1. "Did the tape recorder influence your responses?"
2. "Did any of my activities directly influence your responses? If so, which activities?"
3. "Did you notice that you were acting any differently after the start of the interview than at the beginning? If so, how?"

The first question was considered a buffer question and was not scored. The awareness score was based on S's responses to questions 2 and 3. An example of partial awareness would have been as follows: "It seems as if you said something like 'good' or 'fine' every now and then when I said certain things." A response indicating complete awareness would be, for example, "Every time I stated a decision, you indicated that you approved."

Generalization Test

To test the extent to which behavior modification in the counseling setting as a result of counselor reinforcement would generalize to a non-counseling setting, a projective-type story completion task was given to all Ss following completion of reinforcement interviews as a regular classroom assignment. The story completion assignment consisted of four incomplete stories describing conflict situations. One of the four stories, for example, began as follows:

It was Ken's second year in college. A committee of student leaders had asked to meet with Ken, and at the meeting one of the students made the following proposal: "Ken, we are asking you to run for student body president. We think you would make a great president. We know that most of the students will support you." Ken replied, "[Space for 100-word completion]"

Analysis of story completions was accomplished by rating individually each of the completions in each protocol. Two independent scores were derived for each story completion. One score indicated on a five-point scale the strength and frequency of decision responses and the other score indicated strength and frequency of deliberation responses.

Inter-rater reliability for ratings on decision and deliberation responses for the four story completions was established by performing analyses of variance using two-way classification without replication and using these data to compute intraclass correlation coefficients. The intraclass correlation was used to establish reliability, because there were two sets of ratings on one variable with ratings within the sets unordered. Inter-rater reliability for decision response ratings on story completions 1, 2, 3 and 4 were found to be .86, .87, .89 and .74, respectively. Inter-rater reliability for deliberation response ratings on story completions 1, 2, 3 and 4 were found to be .66, .71, .71 and .63, respectively. All correlations were significant beyond the .05 level.

Results

Deliberation Responses, Counseling Interview

Means and standard deviations of deliberations responses in the counseling interview are shown in Table 1.

An analysis of variance was performed using a Lindquist Type III design to allow for one within-Ss variable (interview periods) and two between-Ss variables (counselors and treatments). Table 2 summarizes the analysis of variance of deliberation responses for two counselors and three treatment conditions across operant, treatment and extinction periods.

Two error terms were used for tests of significance, one for testing within subjects (error w), and one for testing between subjects (error b). The main effects of counselor and treatment and counselor by treatment interaction were tested against error (b). The main effect of interview period and all interactions involving interview period were tested against error (w).

The significant *F* for counselor by period by treatment interaction suggests that change in mean number of deliberation responses across periods was not consistent among treatment conditions and counselors. Inspection of means (Table 1) indicates that the deliberation group increased in mean number of deliberation responses from operant to treatment period and decreased

Table 1
Means and Standard Deviations of Deliberation Responses by Counselor,
Treatment Group and Period of Interview
(*N* = 10 in each cell)

Treatment	Period	Counselor				Total	
		1		2		Mean	SD
		Mean	SD	Mean	SD		
Experimental Group A: Decision Responses Reinforced	2 Operant	3.6	2.50	3.6	2.07	3.60	2.80
	3 Treatment	3.8	2.27	3.0	2.75	3.40	2.56
	4 Extinction	2.6	1.43	4.2	1.99	3.40	1.91
Experimental Group B: Deliberation Responses Reinforced	2 Operant	7.6	4.18	5.6	3.98	6.60	4.20
	3 Treatment	5.0	2.93	13.3	4.96	9.15	5.82
	4 Extinction	2.5	1.86	5.8	3.09	4.15	3.04
Control Group C: Decision and Deliberation Responses Non-Reinforced	2 Operant	3.8	3.52	5.0	2.24	4.40	3.01
	3 Treatment	3.9	4.23	3.1	1.87	3.50	3.29
	4 Extinction	4.0	2.60	4.7	3.26	4.35	2.97

Table 2
Analysis of Variance of Deliberation Responses by Treatment
Group, Counselor and Period of Interview

	df	SS	MS	F
Between-Subjects	59	1,512.99		
Counselor	1	73.47	73.47	3.90
Treatment	2	338.21	169.10	9.97**
Counselor X Treatment	2	83.21	41.60	2.21
Error (b)	54	1,018.10	18.85	
Within-Subjects	120	1,234.62		
Period of Interview	2	59.14	29.57	4.68*
Period X Counselor	2	54.68	27.34	4.33*
Period X Treatment	4	201.66	50.42	7.98**
Period X Counselor X Treatment	4	236.39	59.10	9.35**
Error (w)	108	682.75	6.32	
Total	179	1,747.61		

** $p < .01$.

* $p < .05$.

from treatment to extinction. At the same time the decision group decreased from operant to treatment, and held a constant rate throughout extinction. The deliberation response rate for the control group remained relatively constant throughout the interview. The deliberation response rate which was plotted by counselor across operant, treatment and extinction periods for three treatment groups did not display parallel behavior.

The significant treatment by period and counselor by period interactions qualify interpretation of the main effects for treatment and interview periods. The change in mean number of deliberation responses across periods essentially was due to the increased deliberation response rate during treatment period for the deliberation group under one counselor.

Simple effects of treatment and counselor, and treatment by counselor interaction for one level only of interview period (treatment) were tested using a simple factorial design. The error term was computed from results for the treatment level of interview period. Analysis of variance for these data is presented in Table 3.

The significant counselor by treatment interaction reported in Table 3 and shown in table of means (Table 1) suggests that during treatment the mean number of de-

Table 3

Analysis of Variance of Deliberation Responses by
Treatment and Counselor During Treatment Period

	SS	df	MS	F
Counselor	74.81	1	74.81	5.99*
Treatment	433.30	2	216.65	17.29***
Counselor X Treatment	276.04	2	138.02	11.06***
Error	673.50	54	12.47	
Total	1,457.65	59		

*** $p < .001$.

* $p < .05$.

liberation responses for the three treatment groups differed between the two counselors.

The counselor by treatment interaction has qualified the significant main effect for treatment, suggesting that the differences among treatment groups were reflected mainly in the deliberation responses of the deliberation group under Counselor 2. The main effect for counselors was due almost entirely to differences between the deliberation groups assigned to the two counselors. The deliberation response rate for other treatment groups varied only slightly between counselors.

Decision Responses, Counseling Interview

Means and standard deviations of decision responses in the counseling interview are shown in Table 4. An analysis of variance of decision responses for two coun-

Table 4
Means and Standard Deviations of Decision Responses by Counselor,
Treatment Group and Period of Interview
(N = 10 in each cell)

Treatment	Period	Counselor				Total	
		1		2		Mean	SD
		Mean	SD	Mean	SD		
Experimental Group A: Decision Responses Reinforced	2 Operant	14.4	4.72	11.8	4.14	13.10	4.62
	3 Treatment	12.8	3.82	18.1	5.41	15.45	5.38
	4 Extinction	9.3	3.13	9.5	4.94	9.40	4.14
Experimental Group B: Deliberation Responses Reinforced	2 Operant	8.6	5.94	16.2	4.85	12.40	6.62
	3 Treatment	8.8	2.40	8.9	2.95	8.85	2.69
	4 Extinction	7.1	3.14	14.0	4.69	10.55	5.28
Control Group C: Decision and Deliberation Responses Non-Reinforced	2 Operant	14.4	6.44	15.2	5.95	14.80	6.21
	3 Treatment	9.8	3.57	11.0	3.00	10.40	3.35
	4 Extinction	8.1	2.47	10.8	3.89	9.45	3.53

sels and three treatment conditions across operant, treatment and extinction periods appears in Table 5.

Two error terms were used for tests of significance, one for testing within effects (error w), and one for testing between effects (error b). The counselor and treatment main effects and counselor by treatment interaction were tested against error (b). The main effect of interview period and all interactions involving interview period were tested against error (w).

The significant period by treatment by counselor interaction reported in the variance analysis suggests that the change in

mean number of decision responses between periods was not consistent among the three treatment groups and was not the same for the two counselors.

Inspection of Table 4 indicates that the decision group increased in decision response rate from operant to treatment and decreased from treatment to extinction. The other two treatment groups, in which decision responses were not reinforced, decreased in decision response rate from operant to treatment, and held relatively constant throughout extinction. Comparison of decision responses between counselors indicated that the increase of decision re-

Table 5
Analysis of Variance of Decision Responses by Treatment
Group, Counselor and Period of Interview

	df	SS	MS	F
Between-Subjects	59	2,397.95		
Counselor	1	273.80		
Treatment	2	126.30	273.80	7.92
Counselor X Treatment	2	132.30	63.15	1.83
Error (b)	54	1,865.55	66.15	1.91
Within-Subjects	120	2,636.25	34.55	
Period of Interview	2	396.13		
Period X Counselor	2	14.94	198.06	13.72**
Period X Treatment	4	427.97	7.47	.52
Period X Counselor X Treatment	4	327.16	106.99	7.41**
Error (w)	108	1,560.05	81.79	5.66**
Total	179	5,124.20	14.44	

**p < .01.

sponses during treatment was due mainly to decision responses for the decision group under one counselor.

Simple effects of treatment and counselor, and treatment by counselor interaction for one level of interview period were tested using a simple factorial design. The error term was computed from results for the treatment level only of interview period. Analysis of variance for these data is presented in Table 6.

Table 6

Analysis of Variance of Decision Responses by Treatment and Counselor During Treatment Period

Source	SS	df	MS	F
Counselor	72.60	1	72.60	4.95*
Treatment	476.43	2	238.22	16.07**
Counselor X Treatment	75.10	2	37.55	2.53
Error	800.60	54	14.82	
Total	1,424.73	59		

** $p < .01$.

* $p < .05$.

The significant treatment effect indicates that the mean decision response rate differed among treatment groups. Means reported in Table 4 reveal that the decision group, in which decision responses were reinforced, had a higher decision response rate than either of the other treatment groups. A significant difference between counselors in mean number of decision responses during treatment period was found.

Generalization of Decision-Making Behavior

In order to test generalizability of decision-making behavior from the reinforcement counseling interview to a non-counseling setting, a projective-type story completion task was given as a classroom assignment. Table 7 shows means and standard deviations for decision response ratings for the four story completions for the three treatment groups.

An analysis of variance produced an F value of 11.11 between treatments which with 2 and 57 degrees of freedom was significant at the .01 level. Individual comparisons between the decision group and the deliberation group on number of decision responses revealed a difference of 1.80, with t value of 2.30, significant at the .05 level. Comparison between decision group and control group on decision rating revealed a difference of 1.77 with t value of 2.26, significant beyond the .05 level. No significant differences were found between the deliberation group and the control group.

These findings suggest that reinforcement for decision responses during counseling interviews served to strengthen the decision habit, so that Ss who had been reinforced in counseling for decision responses made more decision responses when given conflict situations in the story completion task, than Ss who had not been reinforced for decision responses in counseling.

Table 7

Means and Standard Deviations of Decision Responses Ratings on Story Completions

Treatment	Story Completion							
	1		2		3		4	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Experimental Group A: Decision Responses Reinforced	1.13	.57	1.07	.89	1.26	.79	.73	1.21
Experimental Group B: Deliberation Responses Reinforced	.43	.56	.89	.93	.76	.83	.38	.65
Control Group C: Decision and Deliberation Responses Nonreinforced	.80	.59	.60	.52	.79	.63	.40	.44

Table 8 reports means and standard deviations for deliberation response ratings on story completions under the three conditions. An analysis of variance was performed on the data, but the main effects for treatment for deliberation responses were not significant at conventional levels ($F = 2.28$, $df = 2.57$). In three of the four stories the deliberation group did produce the highest number of deliberation responses even though the differences were not large enough to reach statistical significance.

The tendency to make decision responses, which was produced during a 20-minute counseling interview, clearly generalized to a non-counseling setting. Evidence for the generalizability of deliberation responses is not as strong.

Awareness

A structured verbal questionnaire given during the closing period of the interview was used to ascertain if experimental Ss were aware of an explicit relationship between response and reinforcement. The results of the awareness test indicated that none of the Ss was able to verbalize the response-reinforcement contingency. It seems clear that the counselor can influence the relative frequency of decision and deliberation responses without the client being aware of the process. It also is possible that under operational conditions many counselors may not be aware of the types of responses they are reinforcing.

Counselors might enhance their effectiveness if they become aware of the types of response they are reinforcing, and if they inform their clients

of their intent to use planned reinforcement counseling.

Summary

The purpose of this study was to investigate the effectiveness of planned reinforcement counseling in increasing client decision and deliberation responses. The sample consisted of 60 male college students, assigned randomly to three treatment groups: (1) decision group, in which clients' decision responses were reinforced; (2) deliberation group, in which clients' deliberation responses were reinforced; and (3) control group, in which neither decision nor deliberation responses was reinforced.

A semi-structured counseling interview was held with each client. During the treatment period of the interview, counselors reinforced appropriate decision and deliberation responses. Following the interview a projective-type story completion task was given as a classroom assignment to test generalizability of behavior modification.

Analyses of data revealed the following: (1) Under reinforcement for deliberation responses Ss increased deliberation response rate significantly and when reinforcement was withdrawn, Ss decreased deliberation response rate. (2) Under reinforcement for decision responses, Ss increased decision response rate significantly, and when reinforcement was withdrawn Ss decreased decision responses. (3) Counselors varied

Table 8
Means and Standard Deviations of Deliberation Response
Ratings on Story Completions

Treatment	Story Completion							
	1		2		3		4	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Experimental Group A: Decision Responses Reinforced	1.22	.80	1.14	.79	1.22	.79	1.43	.98
Experimental Group B: Deliberation Responses Reinforced	2.17	.83	1.44	.68	1.93	.95	1.27	1.00
Control Group C: Decision and Deliberation Responses Nonreinforced	1.24	.86	1.40	.62	1.29	.92	1.57	.91

in reinforcing effectiveness. Differences between counselors may have been related to personality differences or to differences in cueing or reinforcing procedures. In this study no attempt was made to control for personality differences. Future experiments may profitably explore reinforcing effectiveness of various personality types for various types of Ss and tasks. (4) Decision-making behavior generalized to a non-counseling setting. (5) None of the Ss indicated awareness of the response-reinforcement contingency.

This study demonstrates that counselors have the power to influence the client's tendency to make either decision or deliberation responses; and that behavior modification in a counseling setting generalizes to a non-counseling environment.

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The Effect of Behavioral Counseling in Group and Individual Settings on Information-Seeking Behavior¹

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192 eleventh-grade pupils were randomly assigned to individual and group counseling settings in which the following four procedures were used by the special counselors: (a) reinforcement of verbal information-seeking behavior, (b) presentation of a tape-recorded model interview followed by reinforcement counseling, (c) presentation of film or filmstrip plus discussion as a control procedure and (d) inactive control. Findings: (a) Model-reinforcement and reinforcement counseling produced more external information-seeking behavior than control procedures. (b) With a male model, model-reinforcement counseling surpassed reinforcement counseling for males but not for females. (c) Group and individual settings were about equally effective on the average but interactions were found with counselor-schools, sex of subjects and treatments.

One interpretation of the counselor's role is that it is his job to help students learn how to make wise decisions (Gelatt, 1962). Students may learn sound decision-making procedures by engaging in these procedures in connection with their own plans.

While it is not possible to specify what the final decision should be for any particular individual, the process in which an individual should engage if he is to maximize the probability of eventually arriving at a wise decision can be specified. Such a process would include considering several alternative courses of action, exploring relevant information about the possible outcomes of each alternative, and weighing the information obtained with more subjective value judgments in an attempt to achieve the outcomes considered most worthwhile.

The present study was designed to investigate ways of increasing the informa-

tion-seeking behavior of students about their own educational and vocational decisions. The basic problem was to determine which of several behavior change techniques, when applied in either individual or small group settings, would best promote the independent information-seeking behavior of students.

One technique was termed "reinforcement counseling" and has been derived from work in verbal operant learning (Krumboltz, 1963; Schroeder, 1964). Studies in verbal operant learning have clearly demonstrated that the probable frequency of an operant can be increased when it is followed by a positive reinforcer (Green-spoon, 1962; Krasner, 1962). Most of these studies have used a discrete response class, such as personal pronouns or animal responses, with college students in a laboratory setting or with abnormal subjects. Reinforcement effects have usually been assessed immediately without determining whether there is generalization to behavior outside the laboratory. Certain types of

¹This research was supported by a grant to the first author from the Procter and Gamble gift to the Stanford University School of Education and constitutes in part a summary of the Ph.D. dissertation by the second author.

verbal and non-verbal stimuli have been identified as positive reinforcers since they increased the frequency of the response class which preceded them.

The second general technique, termed "model-reinforcement counseling," has involved the presentation of a social model who demonstrates the desired behavior. Research evidence has attested to the effectiveness of social models in promoting certain types of learning (Bandura & Walters, 1963). Reinforcement, while not essential to the acquisition of responses, does affect the rate and magnitude of learning from models as well as the subsequent performance of learned responses. Some evidence suggests that more prestigious and socially powerful models contribute to a greater matching of the models' behavior by observers (Bandura, 1962; Maccoby, 1954; Mussen & Distler, 1959). Studies have indicated that physically present models are not significantly more effective than audio or video presented models (Bandura, Ross, & Ross, 1962; Walters, Llewellyn-Thomas, & Acker, 1962). Providing a prestigious social model and positively reinforcing indications of matching responses has been shown to be highly effective in changing the behavior of observers (Krumboltz, 1963; Schroeder, 1964).

The present study, based on prior research in operant learning and social modeling, has certain unique features relevant to counseling:

1. A specific behavioral outcome, information-seeking behavior, was defined in advance, and alternative experimental treatments were designed to promote that particular behavior.
2. The present study was designed to promote a socially meaningful and socially desirable response class rather than a discrete but socially meaningless response class.
3. Treatments were assessed by reports of behavior which occurred outside the counseling interview, not by behavior which occurred during the interview.
4. To promote generalizability of results the experiment was replicated with six different counselors in six different schools.
5. Subjects were normal 11th-grade high school students who had requested special counseling about future plans rather than college students

who volunteered for a psychological experiment or abnormal subjects.

6. To control for the "Hawthorne Effect," an additional control group received special attention and contact with the counselor but did not receive the experimental treatments.
7. Each technique was applied in both individual and group counseling sessions to ascertain the effect of the group setting.
8. No attempt was made to disguise the response class that was being reinforced. On the contrary, students were made well aware of the counselor's interest in their vocational and educational explorations.

Procedure

This study was replicated in each of six suburban high schools in the vicinity of Stanford University.² All 11th-grade students were asked to indicate if they would be interested in receiving special counseling about their future educational and vocational plans. Between 48 and 63 per cent of the students in each high school volunteered to participate. All students were informed that it might not be possible to provide the special counseling for everyone who requested it. In each high school 20 boys and 20 girls were selected at random from those who volunteered. Two boys and two girls in each high school were assigned at random to each treatment group; four boys and four girls were assigned at random to the inactive control and to the reserve groups. Reserve group subjects were not included in the analysis, so the total N was 192.

Treatments

Subjects were assigned to the two principal treatments, reinforcement counseling and model-reinforcement counseling, applied in both individual and group settings, and to two kinds of control groups plus a group of reserve subjects.

Individual Reinforcement Counseling. The counselor introduced himself, stressed that the students had volunteered to receive special counseling and said in effect, "The purpose of our getting together is to discuss your ideas about post high

²The authors are indebted to the counselors, teachers, students and administrators associated with the following high schools: Cubberley, Cupertino, Palo Alto, Ravenswood, San Carlos and Sunnyvale.

school plans. I usually tape record counseling sessions because it helps me remember what was said. If there are no objections, I'll tape record our session. (Pause) A very important part of making future plans is the getting of information—information that is relevant and accurate. Perhaps you have already taken steps to get information about future plans, such as talking to someone who is in the field of work in which you are interested. Well, why don't you tell me about what you have been thinking about in terms of your future plans?"

The counselor carefully listened during the session for any response which he judged to be of an information-seeking type. The counselor reinforced verbally any indication that the subject had sought, was presently seeking or intended to seek information relevant to his own educational or vocational plans. The following are examples of verbal information-seeking responses:

- a. "I suppose I ought to find out how much college costs."
- b. "Could I talk to an electrician about apprentice training?"

The counselor attempted to reinforce information-seeking responses with some kind of verbal reinforcer. While a stimulus cannot be termed reinforcing until observation establishes that it strengthens the frequency of the preceding operant, it was assumed from past experience that certain counselor responses such as the following were positively reinforcing stimuli:

- a. "Yes, that would be a good thing to know."
- b. "Excellent idea."
- c. "Mm-hmm."

Non-verbal cues such as smiling, forward body posture and head nodding, were also used.

To increase the occurrence of verbal information-seeking responses, the counselors periodically used "cues" (Ryan & Krumboltz, 1964; Rickard, 1961). Such cues were questions designed to increase verbal information-seeking responses. Examples include the following:

- a. "How would you handle this question of what college to attend?"
- b. "There are several ways of getting information about a particular job. Where would you begin?"

The counselor closed the interview by asking each subject to summarize the specific steps which he might take to seek information about his future plans. The counselor verbally reinforced each summary statement and added any specific steps not mentioned by the subject. The counselor asked subjects if they might begin acting on some of the specific steps before the second interview.

The second counseling interview occurred approximately one week after the first interview. The second session began with the counselor saying in effect, "Hello. I'm happy that we could

get together again. At the close of our last interview we mentioned several things which you might do in getting information about your future plans. I'm wondering if you remember what some of these things were? Have you done anything this last week or thought about some ways in which you could get information?" The counselor reinforced any verbal information-seeking behavior on the part of the subject and terminated in a manner similar to that of the first interview.

Group Reinforcement Counseling. The group reinforcement counseling was virtually identical to the above except that the counselor worked with a group of two boys and two girls. The counselor's introductory remarks included the following addition: "I thought that since you all have expressed similar concerns about making future plans and decisions that perhaps together we might be able to help each other. As you all know students often face similar problems and may be able to suggest to one another possible steps in making decisions and choosing alternatives."

The counselor sometimes refrained from interrupting the verbal interaction to reinforce an information-seeking response. Instead the counselor often waited for a pause and then reiterated and reinforced the subject's information-seeking response. The second group counseling session was held one week after the first, and the same reinforcement counseling procedures were utilized.

Individual Model-Reinforcement Counseling. The counselor's introduction to the model-reinforcement counseling was similar to that of the individual reinforcement counseling session with this addition: "But before we start discussing this I thought you might be interested in hearing a tape recording of a boy who faced a problem similar to yours. This student was a very good athlete, active in school clubs and was quite popular. He was concerned about how best to make some decisions about what he was going to do after he graduated from high school. He has been really pleased with his decision and he gave us permission to let other high school students listen to this recorded interview. Let's listen to it. You might have some questions to ask about it when it is over."

A 15-minute edited tape recording of a counseling interview which had been used previously (Krumboltz, 1963; Schroeder, 1964) was then played. In this interview the model student verbalized many information-seeking responses, asked questions about possible outcomes and alternatives and suggesting ways in which he might find answers. The model counselor reinforced his question-asking and information-seeking responses and occasionally provided additional suggestions of ways in which he could find the information he sought.

After playing the model tape the counselor said, "Well, why don't you tell me what you've been

thinking about in terms of your future plans?" The counseling session continued with the counselor reinforcing any information-seeking response of the subject in the same manner as in the individual reinforcement counseling treatment.

The second counseling session one week later was conducted in the same way as the individual reinforcement counseling second session. No model tape was played in the second session.

Group Model-Reinforcement Counseling. Group model-reinforcement counseling was similar to group reinforcement counseling except that the same model tape recording described above was played during the first session. The counselor then reinforced members of the group for information-seeking responses in the same manner as indicated previously. The second session one week later was the same as described above.

Individual Control Film Discussion. In order to control for the "Hawthorne Effect," an active control group was included in which the counselor provided nonspecific attention to subjects. The counselor acknowledged their request for special counseling and then introduced a film or filmstrip with a comment that viewing and discussing the film might prove helpful. Following the viewing of the film, or filmstrip, the counselor answered any questions. If none were forthcoming, the counselor asked subjects for their reactions to the film or filmstrip. The counselor discussed the general problem of future planning, but no systematic attempt was made to reinforce verbally the subject's information-seeking responses. No second session was held.

Group Control Film Discussion. The group session was similar to the above individual session in procedures. Questions from subjects were referred to other subjects to stimulate a general discussion. Again, no systematic attempt was made to reinforce information-seeking behavior. No second session was held.

Inactive Control. Subjects were assigned to the inactive control group from the same pool of volunteers from which the other treatments received subjects. The control group subjects were not contacted by the special counselor in any way. These subjects as well as all others were eligible to participate in their school's regular guidance program.

Reserve Pool. In each high school four boys and four girls were assigned to a reserve category in case any member of the other treatment groups was absent or dropped out of school. These subjects were not included in the analysis of the results unless they were drawn to replace some other subject in the experiment.

Training of Special Counselors

The six special counselors were graduate students enrolled in the Counseling Practicum course at Stanford University during

the 1962-63 academic year. There were five females and one male. Four were experienced teachers while the other two had had one year of practice teaching experience. One of the six had worked as a part-time secondary counselor for two years.

One counselor was assigned to each high school in October of 1962 on the basis of convenience of location and matching of time schedules. The experiment was conducted in February and March of 1963. For purposes of statistical analysis, these six special counselors and the six participating schools are considered a fixed constant factor and will henceforth be referred to as the counselor-school effect.

The special counselors participated in weekly seminars, read various assignments and spent one-half day per week in their respective schools as part of their training. The rationale of behavioral counseling was discussed and role-playing situations were devised during the weekly seminars. Counselors were provided with interview rating sheets on which to categorize verbal information-seeking responses and other responses during the interviews. Each counselor had practice in exercising the rapid judgment needed in deciding whether or not a given statement was to be classified as an information-seeking response.

Counselors selected subjects from the pool of volunteers in their high school to practice interviewing prior to the beginning of the experiment itself. These practice sessions were tape-recorded and were used for discussion and analysis during the seminar. Regularly scheduled individual interviews were also held between each counselor and one of the instructors.

Criteria

The criterion behavior for this investigation consisted of the frequency and variety of student information-seeking behaviors which occurred outside the counseling interview during a three-week period of time after the first counseling interview. Approximately three weeks after the first counseling interview each of the 192 subjects was interviewed by a member of the evaluation team. These interviewers were not

the counselors involved in the study and did not know the type of treatment each subject received. During the interview each subject was asked a series of predetermined questions, some of which were designed to elicit self-reports of information-seeking behavior. Buffer questions were used to disguise the purpose of the interview and to vary the interview format. Each affirmative information-seeking report was followed by other questions to find out precisely how much and what kind of information-seeking behavior was performed by each subject during the specified three-week interval. The following are examples of information-seeking behavior covered by the interview questions:

- a. Writing to request a college pamphlet, catalog or an occupational pamphlet.
- b. Reading books, magazine articles or other material about occupations or educational institutions.
- c. Talking to parents, teachers or other relevant persons who have worked or are working in an occupation or school being considered.
- d. Visiting or making definite plans to visit schools or places of employment that are being considered.
- e. Seeing the regular high school counselor to gain information relevant to future plans.

While subjects had no known reason to falsify or exaggerate the extent of their recent information-seeking behavior, it was considered essential to verify their self-reports. Previous evidence had demonstrated the validity of self-reports of information-seeking behavior (Krumboltz, 1983; Schroeder, 1964). The names of three subjects from each high school were selected at random for verification. Three names were then assigned to each of six research team members who then conducted follow-up procedures of each subject's self-report. The follow-up procedures included such things as interviewing parents, relatives, teachers, students and employed persons to find out whether the subject had discussed some educational or vocational matter with them, checking with librarians to see whether or not a particular book was checked out during the specified period of time and checking with the regular counselor in the school to see whether appointments had been scheduled by each subject. Of 85 information-seeking behaviors reported by these 18 subjects, 79 were verified and 6 were unconfirmable. None of the reported behaviors was invalidated. Thus, no evidence of falsification of self-reports was obtained, a finding consistent with that of the earlier study.

For each subject two scores were derived from the interview protocol, the *frequency*

of information-seeking behavior and the *variety* of information-seeking behavior. The frequency refers to the total number of information-seeking behaviors, e.g., writing to four different colleges for catalogs would give a frequency of four. The variety refers to the number of different *types* of such behaviors, e.g., writing for four different catalogs and talking to three students from Harvard would constitute only two different varieties of information-seeking behavior, though the frequency would be seven.

Results

A $4 \times 2 \times 6 \times 2$ analysis of variance was computed using treatments, sex of subjects, counselor-schools and treatment setting as the independent variables. Separate analyses were computed for the frequency and the variety of information-seeking behavior. Both analyses are summarized in Table 1. Three of the four main effects reached at least the .05 level of significance for both criterion variables. The four treatments produced highly significant differences. There were also significant differences between the sexes and among the six counselor-schools. The main effect for treatment setting was not significant for either variable. The interpretation of these main effects is complicated by the presence of several significant interactions. For both variables the interaction between the treatment and sex of subject was significant. In addition, three other interaction effects reached at least the .05 level for the frequency criterion.

The nature of the sex by treatment interaction and the main effects attributable to the four treatments and the two sexes can be seen in Table 2. The original hypotheses in this study stated that the model reinforcement treatment would be more effective than the reinforcement treatment and that the reinforcement treatment in turn would be more effective than the control procedures. No differences were hypothesized between the control film discussion group and the inactive control group. On the average the results were as predicted on both the frequency and the variety variables. The model-reinforcement treatment

Table 1
Analyses of Variance of Frequency and Variety of External
Information-Seeking Behavior

Source	df	Frequency		Variety	
		MS	F	MS	F
A. Treatment	3	151.48	53.56***	105.52	53.13***
B. Sex of Subject	1	13.55	4.79*	10.55	5.61*
C. Counselor-School	5	15.47	5.47***	5.13	2.72*
D. Setting (Indiv. vs. Group)	1	0.05	0.00	1.88	1.00
AB	3	10.55	3.73*	5.09	2.70*
AC	15	6.21	2.20*	2.99	1.59
AD	3	4.88	1.73	2.14	1.14
BC	5	5.15	1.82	2.00	1.06
BD	1	1.51	.53	2.75	1.47
CD	5	7.47	2.64*	2.01	1.07
ABC	15	3.03	1.07	1.01	0.54
ABD	3	4.23	1.49	1.80	0.96
ACD	15	3.96	1.40	2.07	1.10
BCD	5	8.23	2.91*	3.41	1.81
ABCD	15	3.57	1.26	2.31	1.23
Within Cells	96	2.83		1.88	
Total	191				

* $p < .05$.*** $p < .001$.

Table 2
Mean Frequency and Variety of External Information-Seeking
Behaviors by Treatment and Sex of Subject

Treatment	Frequency			Variety		
	Male	Female	Total	Male	Female	Total
Model-Reinforcement	5.04	5.04	5.04	4.29	4.33	4.31
Reinforcement	3.42	5.33	4.38	3.25	4.66	3.96
Control Film Discussion	2.04	1.96	2.00	1.83	1.87	1.85
Control	1.25	1.54	1.40	1.16	1.54	1.35
Total	2.94	3.47	3.20	2.63	3.10	2.87

proved most effective, followed by the reinforcement treatment. The inactive control group was least active. It will also be seen that on the average the females engaged in both a greater frequency and a greater variety of information-seeking behavior than did the males. The reason for the significant interaction appears to be attributable to the differential effectiveness of the model-reinforcement and the reinforcement treatments for males and females. The hypothesized differences between treatments were tested separately for statistical significance as reported in Table 3. For males the difference between the model-reinforce-

ment and the reinforcement treatments was highly significant with the model-reinforcement treatment proving most effective. For females the differences were slight but in the opposite direction from that predicted. Thus model-reinforcement counseling was more effective than reinforcement counseling for the males but not for the females.

The differences between the reinforcement treatment and the control film discussion group were highly significant for both sexes on both variables in the predicted direction. The control film discussion procedure produced uniformly more information-seeking behavior in all of the

groups than did the inactive control procedure, but none of the differences reached the .05 level using a two-tail *t* test.

The nature of the interaction between treatment and counselor-schools can be seen in Table 4. In four of the six schools the direction of the differences was exactly as predicted, but with counselor-schools *E* and *F* the reinforcement treatment produced slightly higher frequencies of information-seeking behavior than did the model-reinforcement treatment. Table 4

also permits inspection of the means associated with each of the six counselor-schools. The differences between these means proved to be significant, as reported in Table 1, but the exact cause for this difference cannot be isolated since subjects were not assigned at random to the six counselor-schools.

The nature of the remaining two significant interaction effects can be seen in Table 5. With four of the six counselor-schools the group setting produced slightly higher

Table 3
t-Values for Hypothesized Differences between Treatments on Frequency and Variety of External Information-Seeking Behavior

Treatment Comparisons	Males	Frequency		Males	Variety		Total
		Females	Total		Females	Total	
Model-Reinforcement vs. Reinforcement	3.33***	-0.57	1.94*	2.63**	-0.84		1.25
Reinforcement vs. Control Film Discussion	2.84**	6.94***	6.92***	3.59***	7.06***		7.54***
Control Film Discussion vs. Inactive Control	1.63	0.86	1.74	1.70	0.84		1.79

**p* < .05.

***p* < .01.

****p* < .001.

Table 4
Mean Frequency of External Information-Seeking Behavior by Treatment and Counselor-Schools

Counselor-School	Model-Reinforcement	Reinforcement	Control Film	Control	Total
A	5.12	3.12	2.00	0.63	2.72
B	4.38	4.38	3.38	2.00	3.53
C	4.25	3.62	1.50	1.37	2.69
D	7.62	5.12	2.25	2.12	4.28
E	5.50	6.12	1.25	1.25	3.53
F	3.37	3.87	1.62	1.00	2.47
Total	5.04	4.38	2.00	1.40	3.20

Table 5
Mean Frequency of External Information-Seeking Behavior by Sex of Subject, Counselor-School and Setting

Counselor-School	Individual Setting			Group Setting		
	Male	Female	Total	Male	Female	Total
A	2.62	2.25	2.44	1.75	4.25	3.00
B	3.75	3.25	3.50	2.63	4.50	3.56
C	2.25	3.12	2.68	2.50	2.88	2.69
D	3.50	3.88	3.69	5.75	4.00	4.87
E	3.25	5.50	4.37	2.25	3.12	2.68
F	2.88	2.38	2.63	2.13	2.00	2.06
Total	3.04	3.40	3.22	2.83	3.46	3.14

mean frequencies than did the individual setting. However, with counselor-schools *E* and *F* the individual setting produced higher frequencies of information-seeking behavior than the group setting. On the average there was no significant difference between individual and group settings, but within certain of the counselor-schools differences between these two settings were large enough to produce the significant interaction effect.

The significant second order interaction involving sex of subject, counselor-school and setting can also be observed in Table 5. The relative effectiveness of group and individual counseling appears to depend not only on factors associated with the different counselors and schools but also upon the sex of the subjects involved.

The interaction between treatment and setting did not reach conventional levels of significance. However, since the distinction between individual and group settings had most meaning for subjects in the model-reinforcement and reinforcement treatments, a separate breakdown and analysis for these two treatments by setting is summarized in Table 6. The results indicate that for males model-reinforcement counseling was more effective in group settings than it was in individual settings. Reinforcement counseling with males, however, was more effective in an individual setting than it was in a group setting. For females, the settings and treatments produced virtually identical frequencies and varieties of in-

formation-seeking behavior. A complete report of all means and standard deviations for all combinations of independent variables is available elsewhere (Thoresen, 1964).

Discussion

On the basis of these results the following conclusions seem warranted:

1. When model-reinforcement counseling and reinforcement counseling were specifically designed to increase the occupational and educational information-seeking behavior of students, each counseling technique produced more specific information-seeking behavior than that performed by equivalent control groups.
2. The model-reinforcement treatment was more effective for the male students than was reinforcement counseling, but a similar difference for females was not found.
3. Although individual and group counseling settings were equally effective on the average, male subjects receiving model-reinforcement counseling were stimulated more by the group than the individual setting. Reinforcement counseling for males was more effective in the individual than in the group setting.
4. The significant main and interaction effects for counselor-schools indicate that different counselors and/or school settings have differential effects with males and females in group and individual counseling.

One reason why model-reinforcement counseling was more effective for males might be that the model student was a high school male who discussed the field of law, college athletics and ROTC. Such concerns had little direct interest for most females. The model-reinforcement counsel-

Table 6

Significance of the Differences between Mean Frequencies and Varieties of External Information-Seeking Behavior in Individual and Group Settings

Sex of Subject	Criterion	Treatment	Setting		t
			Indiv.	Group	
M	Freq.	M-R	4.33	5.75	2.07*
M	Freq.	R	4.08	2.75	1.94
M	Var.	M-R	4.08	4.50	.75
M	Var.	R	3.83	2.66	2.09*
F	Freq.	M-R	5.00	5.08	.12
F	Freq.	R	5.33	5.33	.00
F	Var.	M-R	4.41	4.25	.29
F	Var.	R	4.67	4.67	.00

* $p < .05$ (two-tail test).

ing procedure might have been more effective than reinforcement counseling for the females if a female model had been used. A study is currently underway to investigate this possibility. In addition, five of the six counselors were females. The addition of a male model might have lent more authority to the female counselors in the eyes of the male subjects.

In the group settings there were two males and two females. The combination of the tape-recorded male model plus another male counselee might have made the group setting seem particularly relevant to the males. This might explain the superiority of group model reinforcement for males. In the reinforcement counseling treatment, however, most of the males were counseled by a female, a situation which might have been easily tolerable in an individual setting but which might have proved more embarrassing in a group situation with only one other male and two females. Such after-the-fact speculating can only be verified by future experimentation.

The fact that individual and group counseling were not equally effective with each of the counselor-schools cannot be fully explained. It seems quite likely that some of the counselors were more effective in group settings than others, but it could also be that some schools had provided more group work experience for their students than other schools. Most of the special counselors felt more threatened by the group counseling than the individual counseling, and some of them undoubtedly responded to this stress more effectively than others. However, the specific factors which caused group counseling to be more or less effective in some situations than in others need further exploration.

Many questions remain unanswered. What effect would different kinds of models have on the information-seeking behavior of various types of students? Are certain kinds of verbal reinforcers more effective when used by certain counselors than by others? Would a greater or lesser number of counseling interviews have produced greater differences? Would a live

model or a model presented by means of both audio and video media have been more or less effective? How does the timing of the counselor's reinforcement affect the amount of information-seeking behavior produced? Would techniques similar to these be equally effective in producing other kinds of behavior change desired by counselees?

This study has demonstrated that counselors can design specific procedures that will result in measurable behavior change on the part of students. In this particular study it was information-seeking behavior that provided the criteria, but counseling itself involves much more than merely promoting information-seeking behavior. In vocational and educational counseling, students need help in formulating reasonable alternatives, discovering the likelihood that they will be successful in each alternative, finding relevant information about where each alternative would lead, considering the relative values associated with each outcome and weighing all these factors carefully in arriving at a tentative decision. Carefully designed procedures for helping students accomplish each of these types of behavior have not yet been devised, but future experimentation may clarify the techniques that will prove most beneficial.

Similarly, a behavioral approach to counseling may prove equally effective with "personal" and "emotional" types of problems. The difficulty for the counselor is one of penetrating the abstract labels which customarily characterize maladaptive behavior to specify the particular change in behavior that the client wishes to make (Krumboltz, 1964). Once the behavior has been defined, a strategy can be developed to increase the likelihood that such a behavior will occur in the future. Work in these directions is just beginning.

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Comment on Two Articles

What is variously labeled as "reinforcement" and "behavioral" counseling and what it may be able to accomplish are nicely illustrated in these two studies. The result is an important application of knowledge about a special kind of "social learning" to relatively complex social situations with (after the late Egon Brunswik) "high environmental probability." A technique for increasing the occurrence of experimenter-desired kinds of verbal behavior on the part of a subject in a laboratory setting, previously applied with demonstrated success—for example, to classroom teaching and psychotherapeutic situations, is now exhibited for potential use by college and secondary school counselors. The technique is intended to elicit from students more frequent verbal behavior of a sort that the counselor thinks is desirable in their educational and vocational planning. And—subject to inevitably necessary qualification—the technique seems to work!

Some of the qualifications I have reference to center on conditions under which

"reinforcement" effects are likely to occur; and some, on the logic of the "reinforcement" process itself. In the words of Krumboltz and Thoresen, "... a stimulus cannot be termed reinforcing until *observation* establishes that it *strengthens* the frequency of the *preceding* operant" (italics not in original). Let me start by calling attention to two instances of apparent illogic in this statement. (a) It is not *observation* but a *process of inference based on observation* that allows an observer to impute the existence of relationship between occurrences that he labels as "stimulus" and "operant" events. Again, to say that the operant is *strengthened* thereby is, at best, begging the question. (b) One may wonder, in any event, by what form of logical or empirical legerdemain the frequency of a *preceding* operant is strengthened by its association with a particular class of stimulus event. Let us assume, for the moment, however, that the foregoing quotation adequately defines a reinforcing state-of-affairs; there is a larger sense in which the concept itself may

be questioned. We have here a "stimulus" event (e.g., the counselor says, "good," following the statement of a desired operant by his client) that is *followed by* the increasingly frequent recurrence of a desired class of operant—a desired *consequence* of presenting the *antecedent* stimulus event. The latter antecedent is now interpreted to be a "reinforcer" of its assumed consequent. In this case there is a potentially fallacious logic in inferring the truth of an antecedent state-of-affairs (i.e., a "stimulus" event as "reinforcer") by virtue of having affirmed its consequent (i.e., the subsequently more frequent occurrence of a desired operant). As Cohen and Nagel (*An introduction to logic and scientific method*. New York: Harcourt, Brace, & World, 1934) have pointed out, this fallacy "is sometimes committed by eminent men of science who fail to distinguish between necessary and probable inferences, or who disregard the distinction between demonstrating a proposition and verifying it" (p. 98). If the authors of these two articles seem unwittingly to have committed such a fallacy, they appear to be in good company with a host of reputable colleagues (e.g., from the late Clark Hull to the still very active B. F. Skinner and groups of their eager and capable intellectual descendants).

On the empirical side of all this one is impressed by the kind and amount of data collected, the neatness of experimental design, the relative sophistication of statistical analysis, and the enviably clear-cut results. Yet when one examines results in these two studies, one wonders why the authors were not able to integrate more of the unexpected consequences in their research with available evidence on conditions under which "reinforcement" effects are likely to occur. While Krumboltz and Thoresen note that the male model student might explain the greater effect on boys than girls, it appears that a much more obvious "model" is offered in the first study by one of the two counselors! Despite Ryan and Krumboltz's apparent failure to treat their "deliberation" and "decision" data (for which an alternative type of variance analysis may

have been more appropriate) as ipsative, it seems clear that Counselor 2 and *not* Counselor 1 is inducing the desired experimental effect (see Tables 1 and 4). Unfortunately, we have no way of knowing whether Counselor 2 is contributing to main effects shown in the Story Completion analyses (see Tables 7 and 8), but a shrewd guess may be ventured that he is. On the strength of my own study of the Ryan and Krumboltz data, I cannot agree that "deliberation" response rates for the two groups varied because of "differences between the deliberation groups assigned to the two counselors." I'd like to know a lot more about Counselor 2, especially, so as to test out some additional "shrewd" hunches.

In the Krumboltz and Thoresen study one wishes again that the authors had explored further some of the implications of what was done and found. For example, we are told that the "study . . . has certain unique features relevant to counseling," among which is number 8: "No attempt was made to disguise the response class that was being reinforced." Why the variation from normal reinforcement procedure? As in the first of the two articles, one wonders about specific counselor effects—as "models." And what of the peers themselves as "models" in the group situations? Supposing there had been all-boy or all-girl groups? At least the latter effects might have been discussed. We are given tantalizing anecdotes that "Most of the special counselors felt more threatened by the group counseling . . ." and that "specific ex-factors" in this situation "need further exploration." I shall not deal here with final questions raised by the authors; except to bemoan the apparent neglect in both articles of important theoretical implications and to note concerning the last paragraph about treating "personal" and "emotional" problems that Matarazzo and Bandura and others have treated some pretty disturbed patients by "reinforcement" procedure.

But enough of this carping. My hat is off to those persons who conceive and execute research studies and who go the extra

mile of making plans, results, and interpretations available to juries of their peers. If one could wish for more careful planning, more intensive analysis of data for the unexpected result, and more thoroughly reasoned interpretation of results, one must also point to an entire knowledge industry as a source of standards and as a basis of comparison. As one of Norway's eminent young social scientists remarked, "Americans are very well-trained, but they are not very thoughtful." How many of us are there who can and do indulge in that delightful brand of soliloquy which David Tiedeman gives to us (e.g., see Tiedeman

& Mastroianni, "Scuttle the Division of Counseling Psychology? Nonsense!").? Relatively speaking, I can say that the two studies reviewed here are *good*; that they offer much, potentially, in the way of integration with an important subject-matter in the realm of experimental social psychology; and that they establish a level of technological competence that others who essay to ask and answer questions about psychological treatment would do well to emulate. To Krumboltz and his students, I say, "Bravo! Let's have more!"

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Psychotherapeutic Improvement as a Function of Communication and Adoption of Therapist's Values¹

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Two aspects of psychotherapy expressed in the following two hypotheses were investigated in 36 college student clients and their six psychotherapists. (1) A minimal degree of communication between client and therapist, within the *client's* language dimensions, is essential for improvement in psychotherapy. (2) Improvement in psychotherapy is accompanied by a shift in the present-self of the client toward the ideal of the therapist as described within the framework of the *client's* language dimensions. Both hypotheses were confirmed. The results were related to previous studies and the apparent inconsistencies tentatively explained in terms of different psychotherapeutic settings and approaches.

The personal characteristics of the therapist, his values, ideals and attitudes, and how these affect the process of psychotherapy, are increasingly coming under close research scrutiny. That this aspect of the therapeutic process is still relatively uncharted and in a fluid state is attested to by the paucity of studies in this area and by the inconsistencies of the results of the few contributions made so far.

In his presentation of a formalized sketch for a theory of interpretation in psychotherapy, Levy (1963) postulates that "the effect of interpretation is predictable to the extent that therapist and patient possess a common core of language meaning and usage," which can be interpreted to imply that success is linearly related to the degree with which patient and therapist "share the same frame of reference." Carson and Heine (1962) found not a linear but a curvilinear relationship between the similarities of client-therapist MMPI responses and treat-

ment outcome. Rosenthal (1955) had evidence to indicate that success in psychotherapy hinges upon the internalization by the client of the therapist's values, whereas Farson (1961) found this to be true only in the cases of the less well-adjusted, less-competent therapists. Approaching it on a more molar level, and working within the personal language framework of the clients themselves, through the use of the Role Construct Repertory Test (RCRT), Nawas and Landfield (1963) found a trend in 20 Ss which, although not reaching significance, runs counter to Rosenthal's findings, i.e., most improved clients tended to increase in their preference for their own construct dimensions, whereas the least improved tended to internalize the therapists' personal construct dimensions.

The present study is anchored in Kelly's Psychology of Personal Constructs (1955) which stresses that the communication process in a therapeutic relationship should focus on the client's own personal meaning system, and in Levy's assumption, cited earlier, concerning commonality between

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client and therapist. The study explores two specific aspects of client-therapist communication. The first, which falls in the area of prerequisites for improvement in psychotherapy, is intimately related to the core of Levy's postulate, as well as to Kelly's emphasis on clients' meaning, and is stated in the form of this hypothesis: *A minimal degree of communication between client and therapist, within the client's language dimensions, is essential for improvement in psychotherapy.* "Minimal degree of communication" is defined as the therapist's agreement with his client that at least one language dimension or personal construct of the client is highly important or highly unimportant as a means for understanding people.

The second part of the study, building on those of Farson (1961), Nawas and Landfield (1963) and Rosenthal (1955) falls in the area of improvement as a function of the adoption by the client of his therapist's specific ideals. It was hypothesized that *improvement in therapy is accompanied by a shift in the present-self of the client towards the ideal of the therapist as described within the language dimensions of the client, rather than those of the therapist.*

Procedure

Ss were thirty-six clients of both sexes seen once a week at the University of Missouri Mental Hygiene Clinic and six psychotherapists who saw them for an average of eight interviews. Only self-referrals and cases not considered to be emergencies or actively suicidal, homicidal or psychotic were assigned to the study. Clients were assigned to therapists on a rotational basis by an intake interviewer who was not one of the therapists. The six psychologists, all with the equivalent of at least one year, full-time experience as psychotherapists, could be described as espousing a developmental, learning approach with a de-emphasis on illness. All agree that problems of living within oneself or with others are resolved in the context of new perspectives and alternatives, particularly related to the

present and anticipated future. None of the therapists belonged to any specific "school of psychotherapy"; their specific approaches differed with different clients.

Both clients and therapists took a modified form of Kelly's (1955) Role Construct Repertory Test (RCRT) soon after the first therapy session. In Kelly's technique the S describes a number of significant others, including acquaintances, e.g. mother, sibling, successful person, unhappy person. The S is asked to consider different sets of three acquaintances. He considers a particular triad by answering the following questions: "Which two persons are alike in some one way which distinguishes them from the third person? How are the two persons alike? How is the third person different?" In other words, the primary data of the RCRT protocol consist of sets of contrasting descriptions of acquaintances in the personal language of the S. Our technique varies from Kelly's in that the S is presented with pairs of his acquaintances rather than triads. He may describe the acquaintances as different, or as similar; and if he sees them as similar, he may choose an acquaintance to represent the difference. Our experience with Kelly's triad approach has led us to believe that some data may be lost when the S must come up with a similarity in order to describe the difference.

As reported, earlier (1963) construct dimensions of each therapist and his client were placed on 3 × 5 cards, shuffled together and given individually to client and therapist, asking them to rank order the dimensions from most important in understanding people to least important. The top five and bottom five choices by client and therapist were defined as most- and least-important respectively for the purpose of this study. Client-therapist agreement or disagreement as to importance or lack of importance was measured in relationship to the five dimensions ranked at the top and the five ranked at the bottom by each pair—the therapist and his client. Additionally, the construct dimensions of each client-therapist pair were mixed and placed on a

rating sheet comprised of thirteen-point scales. Once a month from initial testing, client and therapist rank ordered the mixed client-therapist construct dimensions and were then asked to do the following self sorts on the rating sheets: (a) rate yourself as you see yourself now in the present; (b) rate your ideal; and (c) rate the other person as you see him now—client rating his therapist and therapist rating his client. On the assumption that the therapists would be fairly stable in rating their ideal during the period of data collection, they completed only one ideal rating sheet. For purposes of this study, only initial and terminal rankings and ratings will be considered. Finally, working from short (10 to 30 minutes) pre- and post-therapy typescripts, three highly experienced external judges classified the 36 clients into two equal groups, those improving most and those improving least. The details of the intake and terminal interview procedures as well as the judging operations were reported in an earlier study (1962).

An earlier and separate study by Nawas and Landfield (1963) related to the present one, employed 20 of the 36 Ss used here. Only 20 Ss, seen for a longer period, were used in the previous study because it was assumed, within Kelly's framework, that only Ss seen for a longer period would show *changes in choice of dimensions* (a more basic change), whereas, Ss seen for a shorter period might show *changes of rating within the same dimensions* (a more likely and easily obtained change).

Predictions, Scoring and Analysis

Hypothesis 1: On the basis of the first hypothesis the following two predictions were made: (1a) Of the ten most and least important construct dimensions in understanding people chosen by a client and those chosen by his therapist, in the initial testing, there will be significantly more client-therapist agreements on at least one²

of the *client's* construct dimensions among the 18 most improved clients than among the 18 least improved. (1b) When the *therapist's*, rather than the client's construct dimensions are used as the basis for determining client-therapist agreement on the least or most important construct dimensions for understanding people, such agreement, or lack of it, will be found unrelated to improvement-unimprovement.

Scoring: The five construct dimensions chosen by a client as most important and the five chosen by him as least important in understanding people were compared with those chosen by his therapist, and frequency of *client* construct dimensions which his therapist happened to have selected as least or more important to him in understanding people was counted. The tabulations were then cast in the form of a 2×2 table to test prediction 1a. The four cells stood for the following: most-improved and at least one agreement on a *client's* construct dimension; most-improved and no agreement; least-improved and at least one agreement; least-improved and no agreement. For testing prediction 1b, the following frequencies were tabulated: most-improved and at least one agreement on a *therapist's* construct dimension; most-improved and no agreement; least-improved and at least one agreement; least-improved and no agreement.³

Hypothesis 2: On the basis of the second hypothesis two predictions were made: (2a) The direction of the change in the present-self of the most-improved clients, from the beginning to termination of therapy, will be significantly toward the ideal of the therapist as described in the *client's* language dimensions. (2b) When the *therapist's*, rather than the client's language dimensions are used as the basis for determining the direction of change in the present-self of the client from the beginning to

²Since our criterion of improvement was dichotomous, the *ad hoc* decision was made to use the dichotomy of zero versus one or more agreements.

³All data in the present study were placed in 2×2 tables and chi squares, with one *df* computed. Yates' correction for continuity was applied whenever theoretical frequencies fell below five (Snedecor, 1938).

termination of therapy, the direction toward or away from the therapist's ideal will be unrelated to improvement-unimprovement.

Scoring: Three scores are compared: client's initial present-self (P1), client's terminal present-self (P2) and the therapist's ideal-self (I). We started with I and scored every construct dimension anywhere from zero to thirteen depending on where the therapist rated his ideal on each dimension. The next step was to determine, through comparing P1 and P2, whether the change was in the direction of I or away from it. Our interest was in the direction of the change and not in the degree of change. The following example will illustrate the scoring method. Suppose in one protocol, a therapist rated his ideal as 12 on the dimension of "warm-distant." Suppose also that the client rated himself as 3 on P1 and as 8 on P2 on the same dimension. The change, from 3 to 8, shows a movement toward I. Suppose, instead, that the client's P1 on "warm-distant" was 8 and he rated P2 at 3. Since the therapist's ideal was rated at 12, the change from P1 to P2, in this case indicates a movement away from I. Whenever the therapist's I rating was equidistant between the client's P1 and P2, movement was not scored. Bypassing the therapist's I rating sometimes was scored as movement away. For example, if the client rated his P1 as 2 and P2 as 7, and the therapist rated his I as 4, movement away was scored.

When scoring was completed, each subject was placed in either the category of "moving away" or "moving toward" I, depending on which category the majority of his construct dimensions fell. The four cells of the 2×2 table, which pertain to prediction 2a were these: most-improved and change toward I on client's construct dimensions; most-improved and change away from I; least-improved and change toward I; least-improved and change away from I. For testing prediction 2b, frequencies of the following were counted: most-improved and change toward I on therapist's construct dimensions; most-improved and change away from I; least-improved

and change toward I; least-improved and change away from I.

Dissonance: Client-therapist dissonance was analyzed, although no predictions were made. A *dissonance*, as opposed to agreement on ranked dimensions, occurred whenever the client top ranked (top 5) a client dimension which the therapist bottom ranked (bottom 5), or whenever the client bottom ranked a client dimension which the therapist top ranked.

Results⁴

Prediction 1a: 13 most improved clients agreed with their therapists that one or more of their own dimensions (client's) are most or least important in understanding people. 5 most improved found no point of agreement either on top- or bottom-ranked dimensions. 7 least improved found at least one of their dimensions on which they and their therapists agreed. 11 least improved found no point of agreement. These results support the prediction, $\chi^2 = 4.0$, $p < .05$.

Prediction 1b: 8 most improved agreed with their therapists at least once on therapist dimensions. 10 most improved did not agree. 6 least improved agreed at least once. 12 least improved did not agree. These data do not support the prediction, $\chi^2 = 0.46$, $p < .50$.

Prediction 2a: 14.5 most improved⁵ changed toward the therapist ideal on client dimensions. 3.5 most improved changed away. 5 least improved moved toward the therapist ideal and 13 least improved moved away. These data support the prediction, $\chi^2 = 10.3$, $p < .01$.

Prediction 2b: On therapist dimensions, 12.5 most improved moved toward the therapist ideal. 5.5 most improved moved away. 11 least improved moved toward the therapist. 7 least improved moved away.

⁴Although not critical to the hypotheses under investigation, the relationship between level of adjustment at the intake interview, and later improvement, was not significant, $\chi^2 = 1.32$, $p < .30$.

⁵In 5 cases on client dimensions and 1 case on therapist dimensions, the number of movements toward and away were equal. In such instances, one half case was placed in the hypothesis hold cell and the other half case in the not hold cell.

These data do not support the prediction, $\chi^2 = .30$, $p < .80$.

Dissonance: Presence of one or more disagreements or dissonances was unrelated to improvement-unimprovement, either in relationship to client or therapist dimensions. On client dimensions, 12 *most improved* showed dissonance. 6 *most improved* showed no dissonance. 13 *least improved* showed dissonance. 5 *least improved* showed no dissonance. $\chi^2 = .14$, $p < .90$.

On therapist's dimensions, 7 *most improved* showed dissonance. 11 *most improved* showed no dissonance. 7 *least improved* showed dissonance. 11 *least improved* showed no dissonance. $\chi^2 = 0$.

The results of this study, understood within the theoretical position outlined, indicates that to be effective, the therapist must share with his client a minimal commonality of perspective in perceiving significant others. This prerequisite of some degree of convergence of the client-therapist frames of reference must, however, be within the client's own language dimensions rather than within the therapist's language framework. The results also suggest that dissonance between client and therapist is not as critical an issue as the therapist's sharing of common ground within the client's world of understanding. Whether a great deal of dissonance would interfere with effective communication, as Levy's formulations (1963) suggest, and a great deal of consonance would lead to an impasse and ineffective results as Carson and Heine's study (1962) implies, are important empirical questions which we could not pursue because of the limitations of the instrument and method we used in this study.

The findings of this research, together with one previously reported (1963), indicate that Rosenthal's conclusion (1955) that improved clients internalize the specific values of their therapists can be accepted, but with reservations. It seems as if the improved clients may be influenced positively by the therapist's ideals *at the same time* some of them are shaking them-

selves free from dependence on the therapist's language framework. This paradox occurs where internalization of the therapist's ideals can be accomplished within the client's own personal frame of reference and language system.

It may well be that our data support hypotheses that have more general application to various therapeutic settings and approaches; then again, our findings may relate primarily to the therapeutic point of view and therapeutic setting briefly outlined in the introduction, and possibly to psychologists who are enamored with the Psychology of Personal Construct approach. Taking the position that our data relate to our own particular theoretical framework, one can speculate about the correlates of other approaches. For example, some psychotherapists spend endless hours with their clients, trying to teach them a complete new set of language dimensions within which to understand themselves, others and the therapist. This type of therapist needs a client who is highly dependent and externally oriented. Research within such a context of psychotherapy would likely show that client change toward therapist ideals takes place more within the therapist dimensions than within client dimensions. There are other psychotherapists who place such overemphasis on individuality that clients may terminate because they find it hard to know the therapist as another living human being with values, attitudes and idiosyncracies. This type of therapist is so focused upon understanding his client that he may fail to appreciate fully the importance of a reciprocal relationship between client and therapist. Clients who voluntarily continue with such therapists may be highly independent, or at least, sufficiently self-centered not to need the therapist, his language or his specific ideals; the therapist serves primarily as a medium for catharsis. One would predict that these clients would neither move toward the therapist's language dimensions nor necessarily toward the therapist's specific ideals.

Possibly, Rosenthal's conclusion may apply *only* to certain types of psychiatric set-

tings. The relevance of the therapist's approach and the "school" with which he identifies cannot be too strongly emphasized. Many psychologists, including the present authors, believe that what Levy (1963) calls "status differential" is sharpest in psychiatric settings, and that psychoanalytically-oriented psychotherapy tends to foster dependency on the therapist—at least in the first part of the course of therapy which could extend to one or more years. In Rosenthal's study, where psychiatric residents were used, we might assume that not unlike most psychiatrists, their orientation is psychoanalytic. If this is the case, Rosenthal's findings become understandable. It is relevant to point out that in Farson's study (1961), where the therapists were client-centered, only the clients of the less well-adjusted, less competent therapists tended to adopt the specific attitudes of their therapists. The setting in which the data of this study were collected is directed and entirely manned by psychologists who do not focus on any one type of explanation, yet do place greater emphasis on the present and anticipated future and are more or less active and structuring as the need arises.

The present and previous study (1963) support the theoretical position of Kelly (1955), who emphasizes the importance of

studying personal dimensions of meaning, and further point out the importance of differentiating between frames of reference and specific attitudes, client language and therapist language and the importance of considering therapeutic hypotheses in relationship to the therapeutic theories and settings from which they are generated.

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Innovations in Counseling¹

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The press of increasing demands for counseling services and the insufficient pool of professional manpower give counseling and clinical psychologists strong incentives to consider critically our present practices in light of these problems. This paper considers only one area of innovation in evaluation and treatment practices, namely the use of audio and audio-visual media for transmission of information. Concrete examples of rationale, mechanisms and illustrative content are provided. While the effects of such usage remain an empirical question, the potential exists for finite amounts of professional man hours to reach far larger numbers of individuals than those now seeking traditional counseling or clinical services.

Innovations in any field are symptomatic of a dynamic self criticism and search for improvement through change. The greatest deterrent to innovation is an inertia, a comfortable acceptance of yesterday's habit patterns for tomorrow's work. But the contexts in which counseling occur are also dynamic and changing and these changes are a mounting counterforce to acceptance of the status quo.

The forces which I feel will stimulate some different and novel developments are many. Let us consider three. First, limited professional manpower. Since World War II, the number of psychologists have quadrupled, with current APA membership exceeding 19,000. However, according to *Mental Health Manpower Trends*, Monograph No. 3 of the Joint Commission on Mental Illness and Health, only $\frac{1}{3}$ of American psychologists are engaged in counseling or clinical services. The Joint Commission has recommended the establishment of comprehensive community mental health centers on the basis of one center per 50,000 population. Consider the staffing demands in only the traditional fields of psychology, psychiatry and social work. Albee (1963) has indicated that to provide

these staff alone would require $\frac{1}{2}$ of the total membership of the American Psychological Association, $\frac{1}{2}$ of the American Psychiatric Association and $\frac{1}{2}$ of the National Association of Social Workers! In a recent survey (Magoon, 1960) of college and university counseling centers, the ratio of employed counseling and clinical psychologists to the enrolled student bodies averaged 1:2300.

In the 1962-1963 Data Bank Survey (Magoon and Giblette, 1963) of essentially the same institutions, this aspect of the manpower and service problem is clarified. What proportion of the student body were engaged in counseling contacts during that year? The median percentage across 46 reporting counseling centers was 13%. It appears unlikely that counseling centers can do much more through traditional means of communication and treatment.

At the public school level, during 1961-1962 there were 36,400 secondary school counselors, of whom less than 16,000 served as counselors on a full time basis. These numbers suggest a counselor-student ratio in the vicinity of 1:1300. The estimated number of counselors needed to reduce the ratio to workable proportions of say 1:400 seems hardly within our grasp. In short, the available counselor-clinician man hours are overwhelmed by the potential if

¹In part, a paper presented at the American College Personnel Association meetings, Boston, April, 1963.

not the actual demand for professional services. There are not enough trained personnel with enough time.

Second, the school counselor and school psychologists in our culture's schools seem to be increasingly invested with capacities which allow such influential writers as Conant and others to refer to them massive amounts of diagnosis, guidance and rehabilitation of students, parents and staff. At some point in time (and I am suggesting it is now), traditional treatment methods employed by traditionally trained school counselors and psychologists confronted with a crushing load of potential clients cannot measure up to these growing expectations of the potency of our roles.

Third, there are an increasing number of studies concerned with the educational environments and subcultures in which American adolescents live. Recently, Coleman (1961) in his analysis of the adolescent society concluded that the adolescent is living more and more in a culture of his own—a subculture not easily grasped or coped with regardless of the good intentions of the counseling staff. As this gap between adolescent and adult subculture increases—and Coleman maintains that it is increasing—so does the complexity of the task facing the counselor-clinician as an adult representative in the eyes of the adolescent.

Having identified these cheerful prospects, what are the kinds of developments which they may stimulate? There are many. One of these developments has to do with the use of other media in counseling. An impetus for such use comes from the National Defense Education Act which includes one title devoted to research grants for investigating uses of new media in education. A further impetus comes from the 1962 national invitational conference sponsored by the American Personnel and Guidance Association, and financed by NDEA funds. The purpose of this conference was the exploration of new uses of media in counseling and education. In the area of adapting various audio visual media and techniques lie vast potentialities for counselors and counseling and clinical psycholo-

gists. I came away from this conference with a distinct impression. It was this—with regard to our communication efforts to date, we have settled for so little. By communication, I am referring to (a) written documents such as occupational-educational information, and (b) the counselor's or clinician's verbal behavior in interviews or consultations with clients or parents. Let us consider each in turn.

As to occupational or educational information, I have the impression that a Martian visiting with a counselor would likely regard our occupational materials as classified information. He would reach this conclusion from observing the rituals the individual needed to go through to locate the material, the high reading difficulty and low human interest of the content, and the very small number of individuals in our culture who report having read such information and/or report its having influenced their educational-vocational career plans. For all these reasons the Martian would probably conclude that not only was the material classified, but that we were extremely successful in maintaining the security of the materials. It is, of course, quite true that such materials are often or usually supplemented by individual or group discussions with a counselor. And, it is such verbal interchanges—including an indeterminant proportion of many counseling interviews—which also suffer in terms of their impact upon students in contrast with uses of other media. The point is again, that counseling and clinical psychologists have settled for so little in the utilization of effective communication media.

Having linked both the written and oral forms of communication together, perhaps we can explore their limitations together and do it from the vantage point of the receiver of such communication. What would be criteria for communications to have maximum impact upon an individual? What is the status of the typical student recipient of counseling services? Does he or she manifest a high degree of motivation to learn? With regard to realistic educa-

tional-vocational planning, this condition is rarely present among adolescents or post adolescents in our culture (or among many adults for that matter). In fact, many cultural forces such as the actions and values of peers and parents in subtle ways may often discourage an individual's realistic appraisal of self or his environment.

If then a *mild* degree of motivation is more characteristically the case, the following criteria suggest themselves:

1. The media of communication should be maximally vivid to the receiver.
2. The materials should be located with reference to optimal absorption by student recipients.
3. The content should be readily available *on demand*, i.e., when the individual is most ready to absorb it.
4. The content should be repeatedly available for recurrent use by this mildly motivated individual.
5. The form of presentation should stimulate the individual to explore further resources, and provide guidance in this direction.
6. The form of presentation should provide for some means of recording—in as objective a fashion as possible—the frequency with which different materials are used.
7. The form of presentation should allow for some ready criticism and suggestions by the users enabling revision and extension of the materials.

Now let us consider briefly the inadequacies of the typical oral communications of the counselor or clinician in interview settings.

First, they rarely are highly articulate. This is simply a function of the fact that issues discussed are often highly complex and the demands of the interview situation call for spontaneous speaking "on one's feet" so to speak; a condition of which *any* practitioner is painfully aware if he has had occasion to listen to tape recordings of his own interviews.

Second, while much of the practitioner's interview behavior may involve relatively unique content, a content analysis of interviews would reveal that there are a number of content areas where the practitioner repetitively goes over the same material with many different individuals. (An illustration might be the area of what factors are worth considering in regard to plan-

ning a career.) Aside from interview content per se, any experienced practitioner is aware of certain constellations of characteristics of his counseling, his students, etc., which are predictable, common topics in work with clients. (An illustration here might be the various ways of structuring counseling to individuals.)

Third, even if a practitioner's verbal behavior in counseling is highly articulate, there still remains the fact that the interview interaction is a once occurring event—one which should the client wish to review subsequently, has vanished into thin air. It is true that another appointment might be made, but here again arises the issue of the mildness of the client's motivation and the traditional, appointment-making rituals by which we live.

So much for what appear to be rather basic inadequacies or at least limitations in the traditional means of communication employed by the counselor. What kinds of media and what kinds of content might lend themselves to overcoming the above limitations? This is not an easy question. Our habit patterns of thought and action are well fixed and this question is a challenging invitation to free oneself, to break set if you will, and consider other creative uses of communication media and content.

Occupational Information

At the Media Conference, Richard Rundquist demonstrated several taped interviews conducted with members of different vocations. Following this lead a number of these, in somewhat more brief and structured style, were recorded at the University of Maryland in two seminars dealing with occupations. A careful review of these led us to the conclusion that in an interview we could not rely on the job holder to carry the freight of depicting an occupation's general characteristics. Hence, we are embarking on the following sequence:

1. Synthesize occupational brief materials into a 5 to 10 minute tape recorded transcription.
2. Immediately following the excerpts is a 5 to 10 minute interview with a job holder in the particular field. The job holder will comment

- on the validity of the excerpt, make additions, and offer a brief picture of *one* member's role in the occupation.
3. Press the tape recorded content onto records. This conversion allows making the material maximally available to listeners.
 4. Insert these records into a juke box machine.
 5. Locate the juke box machine at or near a well populated location, comfortable and with minimum distractions. Illustrations would be the library, dormitory lounge, student union, reference room, etc.
 6. Attach one or two sets of earphones to the machine so that the presentation is made available only to the active listeners.
 7. Provide reaction cards and a suggestion box to collect feedback information for extensions or revision of the recorded messages.
 8. Take periodic readings from the machine's counters which keep cumulative counts of the number of times a presentation has been requested of the machine.

Educational Information

As an illustration of audio aids in this area consider the problem of the student—also probably mildly motivated—who is undecided about the field of study in which to major. College catalogues are of dubious readability. To contact even a bare majority of academic departments within an institution is an exceedingly costly undertaking. And it assumes the student would be empathically received and that he would be wise enough to ask the right questions: all questionable assumptions indeed.

Our current effort in this area is to develop a semi-structured interview form and arrange to make recorded interviews with the chairman of each department. The questions range from what the field of study covers, to where the students go after graduation. The interviews last from 10 to 15 minutes. They will be pressed onto records and used through the juke box mechanism. It should be noted that this means of communication would allow a student to vicariously participate in as many information-seeking interviews with departmental chairmen as he had desire for knowledge. Furthermore, he could listen in whenever he wanted the material and could return to it at any time.

Extensions of this mechanism as a random access machine are virtually unlimited.

In a recent pamphlet entitled *Revitalizing Small High Schools*, (Ford, 1961) there is an illustration of the juke box used to present social science materials in the Margretville (New York) High School.

In a different vein there are certain kinds of interview interactions which may lend themselves to presentations through different media. For example, at the Counseling Center of the University of Maryland all students who had sought assistance of our educational skills program used to receive the benefits of a 15-20 minute intake interview with one of the staff. The interview was designed to provide information about the Reading and Study Skills Laboratory, answer questions frequently asked by students and to stress the role of motivation as a factor in improvement. At present we hold none of these interviews. Instead we have scripted a quite articulate presentation of this material and recorded it on a message repeater tape. The tape is mounted on a tape recorder with earphones in the reception room of the Counseling Center. The Receptionist refers interested students directly to the recorder. The operation of the recorder is self administering.

In similar fashion, there may be repetitive content in many interviews that can be similarly treated or which may lend itself to a form of programmed instruction. Gilbert and Ewing at the University of Illinois have been developing a form of programmed instruction to deal with one common problem which new university students bring to counselors or advisors, namely the question of what they can learn about themselves from their freshman entrance tests and what these tests measure. Should these investigators empirically demonstrate that this can be done—that students learn more of themselves, hold more accurate views of their assets and liabilities and the like—the implications should have far reaching effects.

A somewhat different innovation—also in the diagnostic area—is found in a recent report by Cogswell of the Systems Development Corporation entitled *The Systems Approach as a Heuristic Method in Educa-*

tional Development: An Application to the Counseling Function (Cogswell, 1962).

Are there potentially valuable innovations involving new media in the processes of treatment as well as diagnosis? This is a more difficult area and most applications here have been indirect ones in the area of training—the use of films, tapes, kinescopes, the two way communication device allowing supervisor to communicate with the person supervised during the treatment process, situation testing (used both for evaluation and for instructional purposes) and the like. However, these of themselves are not direct modifications of treatment.

Vicarious Counseling

I would like to share with you two illustrations involving adapting new media beyond information giving situations. Krumholtz (1963) recently has presented a variation of the second.

The Two Party Monologue

This procedure involves audio presentations on different topics—topics presumably of concern to many individuals and ones which represent common problems, crisis or stress situations. The monologue, instead of a speech, is an interrupted conversation with the listener—the interruptions are silences which follow questions asked of the listener. Naturally the level of presentation must be general, but the questions are designed to stimulate relatively unique responses for each individual, and by indication to indicate the variables to be considered in effective problem solving. Such materials have the advantage of being available to all individuals, many of whom would rarely ever seek assistance of a counseling service. Perhaps some individuals exposed to this material would seek counseling subsequently. In that event, we might hope they would be “better” clients.

Vicarious Counseling

This second illustration is empirically investigable although quite costly. The research hypotheses would be these: Vicariously experiencing the full interview treatment process of another individual whose constellation of problems includes features

with which the individual can identify, will: (a) reduce the number of applicants for subsequent traditional counseling-psychotherapeutic treatment, (b) reduce the length of traditional treatment among those who do still need it, (c) among those who do still need it, produce client interview behavior judged by the psychologist to be more problem solving oriented than that of the typical client. The criteria involved in the above hypotheses are reasonably objective and verifiable.

Now, just how might these hypotheses be tested? First, collect the complete taped interview interactions of a number of clients manifesting the relatively more common constellations of problems. While of course this commonality may vary greatly from one agency or institutional setting to another, I am assuming that within a given type of agency at least, client problem constellations vary in their frequency. Having collected one or two illustrations of each of several constellations, prepare typescripts and improve the “teaching potential” of the interaction wherever in your judgment it is improvable. Next, use either staff or paid personnel to act out these parts and video tape the interactions. The virtue of the video tape lies in the fact that, just as with audiotape, at any point it may be erased and re-recorded until an optimal performance by practitioner and client is obtained. Following this the video tapes should be converted to 16mm film, and the materials set up in some form of film library in a projection area.

At this point we have a number of complete treatments—whether 2 interviews, 5, 10 or 20—for several “popular” client problem constellations. The intake interviewer gains a foreknowledge of these “clients’” characteristics. Now, during the intake interview process, in addition to his typical concerns, the interviewer also attends to the question, “Within our library is there a client’s treatment process with which I infer this client can identify?” If so, this is structured to the client and he or she is given the needed series of projection room appointments to vicariously experi-

ence the unfolding of the filmed client's problem solving processes. Obviously variations are possible as to the extent of personal contact the client might be exposed to during this experience—from none at all at one extreme to interview by interview at the other. The outcome measures, particularly those involved in the first two hypotheses, are quite straight forward.

As to the likely results, at this moment they would be highly debatable—just as are the number of teeth in a horse's mouth, since all of the pooled agreement or disagreement in the world still lacks something that is possessed by a good look in the horse's mouth. In short, the nature of the results, while debatable, is an empirical question. However, it should be apparent that any positive results would have dramatic implications for manpower utilization and for the psychologist's role in mental health services and research.

In summary, I have suggested that counselors are on the threshold of a new era, where partly due to their own creativeness and partly due to external pressures, the traditional conceptions of diagnosis, treatment and our roles in these processes warrant creative re-examination. Traditional orientations and practices will, of course, be with us by definition and this is as it should be. But, *some* counseling and clinical psychologists should be spending *some* time investigating these new developments. I have illustrated several approaches to the

use of new media in the work of the counselor.

The effects of such usage remain an empirical question. Potentially, communications in counseling will become more effective. Potentially—and perhaps of more importance—finite amounts of professional man hours can reach far larger numbers of individuals than those now seeking out traditional counseling or clinical services.

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The Use of Non-Professional Auxiliary Counsellors in Staffing a Counselling Service

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In Australia marriage counselling services are mainly staffed by non-professional counsellors who are carefully selected and trained, and have a healthy motivation for the work. The supervised use of this source of suitable man-power enables a wider use to be made of the limited number of professionally educated persons in the community. The success of this practice in Australia has implications for communities faced with a shortage of counsellors in the fields of mental health, delinquency, adult probation, rehabilitation, alcoholism and other areas of community need. It is suggested that psychologists should seek leadership roles within this movement.

Marriage counselling services in Australia are offered by two types of organization. One type, employing university educated social workers, offers marriage counselling as part of a general program of family casework service, the other, in conjunction with programs of education in marriage and family living, offers marital and premarital counselling only. The last mentioned type of organization may have some counsellors who are professionally educated in social work, psychology or medicine, and these people may work on a salaried or honorary basis, but the largest proportion of counselling is undertaken by people who are not professionally qualified in these disciplines and who give their services voluntarily.

In Australia there is a serious shortage of professionally trained counsellors, but each year partners to about 7,000 marriages, and about 1,000 couples with premarital problems come to 19 marriage counselling organizations which have 25 counselling centres throughout Australia. A small number of these clients have problems which are solved by some specific factual advice or by referral for medical, legal, social or religious advice, but nearly all of them need counselling help with relationship dif-

ficulties arising from personality problems of one or both of the partners.

Counsellors at these 25 centres number about 270, of whom 235 are part-time workers giving their services voluntarily. They include housewives, accountants, clerks, salesmen, doctors, lawyers, chemists, ministers of religion and many others. They have been carefully selected, undergone a part-time training course, and counsel under the immediate supervision of professionally educated or very experienced counsellors. Their work is done under the general oversight of a panel of professional consultants including psychiatrists, psychologists, doctors, lawyers, social workers and churchmen.

There are differences between organizations in the selection and training programs adopted, but the underlying objectives and principles are similar. The first aim is to attract applicants who have had a full adult experience of life, and have been relatively successful in their own marriage, family life, employment and in other social relations. Trainees are usually in the 30 to 50 years age range. With exceptions, organizations insist that trainees be married or widowed and not currently divorced.

The Selection of Trainee Counsellors

Selection procedures may involve the use of psychological tests, self descriptions, role playing and group activity, but interviews with psychiatrists, psychologists, social workers and other similarly qualified people are the main part of the program. The purpose of the procedures is to evaluate such personal qualities as: sincere regard for others, tolerance and ability to accept people with values different from one's own, a healthy regard for the self, a warmth and sensitivity in dealing with others, and a capacity for empathy. Rejected is the person with a need to dominate and direct or one who seeks the opportunity of inflicting his real or ideal value system upon others. The aim is to select a person capable of creating a relationship with his client so that the necessary and sufficient conditions for successful counselling, as described by Rogers are developed. As Pentony (1959) has pointed out, "client centred counselling, to be effective, is not a role which one can step into or out of at will, but is an expression of the person. Only in so far as there is harmony between the overt behaviour and the underlying personality structure of the therapist can we expect genuine acceptance of the client."

Little emphasis is given to academic achievement, but an intellectual capacity adequate to handle studies at college and university level is considered necessary to cope with the demands of the training course. Very little has been done in the way of validating selection programs, but the general success of the trainees, when they commence counselling, indicates that defects in the selection processes are more likely to lead to the exclusion of false-negatives rather than to inclusion of false-positives. Candidates are selected initially for training only. They are also assessed during and at the end of the training program before being given the status of 'Associate' counsellor. They then commence counselling under close supervision.

Counsellor Training

Training programs vary in length of time from 15 months to 2 years with the training

group meeting one to two evenings a week. Some organizations have training weekends in their program. The introductory phase of training includes such subjects as sociology of the family, developmental and social psychology, an introduction to psychopathology, physiology and anatomy, family law, religion and ethics and some personality theory. The main purpose of the course, however, is to teach counselling technique and to develop practical skill in one method of counselling. The non-directive, client centred, approach of the Rogers' school is the technique most widely used. It seems to be the easiest to teach and the safest for use by counsellors with limited psychological knowledge. After the training course and about two years of closely supervised, continuous counselling experience the counsellors become, within the strictly defined limits in which they work, remarkably skilled and sensitive in the use of this technique.

During training, the trainees study tape recorded cases and transcripts, they do role playing exercises, and, in the later stages, discuss their own interviews from notes or tape recordings. Although the purpose of all this is to train in practical skills of counselling, the later stages of training have much in common with therapy groups as the trainees develop in self-knowledge and insight. The relationship between the counsellor-trainee and the supervisor also tends to be a therapeutic relationship when the counsellor-trainee begins to counsel clients.

The Motivation of Counsellors

The counsellors are trained as technologists, not scientists, and few of them are interested in research. With the pressure being so great to select, train and supervise counsellors, professionally trained people have had little time to devote to this. One of the many and important research topics awaiting attention is study of the motivation of people who volunteer to serve in the marriage counselling field.

Those selected for training appear initially to be motivated by a desire to be of service to others, a need to find a spare

time activity which is useful and constructive and a need to widen their range of personal relationships. Very early they become interested in the philosophy of counselling with its emphasis on the individual, his capacity for growth and his right to self determination. They find this refreshing and different from the attitudes and values of our usual way of life with its increasingly material emphasis. As association with the counselling organization progresses, the counsellor becomes more identified with the organization and develops mutually satisfying relationships with the other members of his group. He finds through this, and through his experience as a counsellor, that his own experience of life becomes more full and rewarding. The counsellor, again in the words of Rogers "learns that the development of the way of looking upon people which underlies this therapy is a continuing process, closely related to the therapist's own struggle for personal growth and integration. . . ." Counsellors often comment upon how relations with spouse, children or employer are more satisfying, constructive and interesting since they started training.

Some voluntary counsellors obtain direct practical rewards in their employment although they do not start out intending to do this. Doctors and lawyers who have trained as counsellors comment on better relations and more helpful interviews with their clients, clergymen that they are more effective pastoral workers and employers that they have more positive relationships with their staff.

Amongst those offering for training in marriage counselling there are two groups of people which appear to be a product of contemporary circumstances. Firstly, there is a group of intelligent and thoughtful housewives, who, reaching an age when their family responsibilities are diminishing, are seeking a satisfying way to use their personal and intellectual capacities. Many of these are also included in the second group of people, who, due to lack of employment and educational opportunities when they left school during the de-

pression, have been under-employed. Some of these people have an intellectual capacity with which, if leaving school today, they would be training to enter learned professions. The marriage guidance organizations offer them the opportunity of satisfying intellectual stimulation and companionship which they otherwise lack.

The Results of Counselling

Voluntary counsellors work in marriage counselling services in Great Britain and New Zealand similar to the way they do in Australia. Wallis and Booker (1958) examined cases dealt with by marriage guidance councils in Great Britain during 1952 and 1954. They concluded that the apparent outcome of counselling was that in 16½% of cases the problem was solved and in a further 17½% of cases the marital relationship was improved. There is no information published about the results of marriage counselling in New Zealand but non-professional workers offer a marital conciliation service to couples applying to the magistrates courts for matrimonial relief. In 1960-61, 18% of such cases were withdrawn in the areas where this service was offered. In Australia, for the past three years, counsellors have rated the outcome of their own counselling. It is estimated that in about 15% of cases the problem of the couple was solved and in about 25½% relations were noticeably improved.

The Australian Government, and all but one of the State Governments, give substantial financial support to marriage counselling organizations. As finance and qualified people become available, there will be an increase in the number of professionally educated counsellors employed. This is consistent with a general trend towards increased professionalization as the number of graduates in the community increases. In the foreseeable future, due to shortage of finance and man-power, there will still be a great need for the voluntary non-professional counsellors to supplement this work force. In the fields of preventative mental health, rehabilitation of prisoners and of the mentally and physically handicapped, and in the supervision of

people released from prison on parole or licence, there is a rapidly increasing need for people to provide help of a counselling rather than a material nature. The successful use of voluntary counsellors in the marriage field in Australia is a practical demonstration of the way additional sources of man-power may be obtained to fulfill this need. The use of members of the local community in this way is in keeping with modern trends in psychotherapy, in which early treatment of the patient in his own environment is advocated and the community in turn accepts responsibilities to those afflicted. In March, 1963, before the Subcommittee on Health of the Senate Committee on Labour and Public Welfare, Hobbs, when speaking of the shortage of trained personnel said:

First we must discover new sources of personnel, people who can work effectively in mental health programs even though their formal education is limited. The suggestion is that we exploit fully the concept of individual differences, bringing into mental health programs people whose own life experiences, quite apart from formal education, have taught them how to work effectively with people.

Secondly, we must find new ways of multiplying the effectiveness of psychiatrists, psychologists and other highly trained people who are in short supply. This goal can be achieved by developing patterns of consultation that will permit mental health specialists to work through other less well trained persons (Hobbs, 1963, p. 298).

The practices advocated by Dr. Hobbs have in effect been tried out in Australia in the marriage counselling field. The results cannot yet be described in experimental language, but the increasing case load of clients and the increase in numbers of professional people willing to associate with such a counselling activity indicates that the controlled and supervised services of selected and trained non-professional workers can provide a useful service to areas of great need in the community.

In this brief and general account it would be incorrect to give the impression that

this form of counselling was always accepted by all professional workers. It has increasingly become accepted, but some psychologists and many social workers at first feared a dilution of counselling standards and consequent loss to themselves of professional status. The converse now seems to be the case. Those who offered their services in the development of these counselling organizations found the experience of leading and teaching gave opportunities to improve professional skills and increased opportunities for valuable professional contacts. Accepting leadership roles has led to improvement in professional status and greater opportunities to demonstrate professional competence.

The move to use or employ non-professionally-educated counsellors should be carefully considered by professionally-educated counsellors. They should be prepared to accept the challenge to act as leaders and teachers to those who are meeting an important community need. Apart from this, they have a responsibility to their own profession to provide constructive supervision, to guard against depreciation of counselling standards and the intrusion of "lay" counsellors into areas beyond their competence.

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Effects of Brief Vocational Counseling on Temporal Orientation

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A process which leads a person to assess his plans and resources and make a personally significant decision may cause enlargement of the person's time perspective. One hundred three college students seeking vocational counseling were assigned to pretested and unpretested counseled and held out groups. Temporal orientation was measured by number of temporal words chosen for a story, duration of a written story and distribution of associations to "self" in near and remote, past and future time categories. Differences between counseled and held out subjects were consistent with hypothesized enlargement effect, and the story duration results were reliable. *Post hoc* analysis suggested the effect was specific to future time.

In considering change in time perspective, Lewin (1951, p. 76) wrote: "There seem to be no experimental data available on ways in which such a change can be achieved other than through normal development." The possibility that counseling alters the counselee's temporal perspective is not a conspicuous theme in current statements of counseling theory and practice. However, a process which helps a person to assess his plans and resources and make a personally significant decision (Tyler, 1961; Vance & Volsky, 1962) may cause "enlargement of the time perspective" (Lewin, 1951, p. 75). In the present study, brief vocational counseling was the independent variable and three indices of temporal orientation constituted the dependent measure. Two of the indices of time orientation, proportion of temporal words preferred and time span of a written story, were based on previous research (Brock & Del Giudice, 1963); a third, comparison of

frequency of associations to "self" in past, present and future time, was developed to provide a measure more apposite to Lewin's (1951) construct. The hypothesis was that, from a sample of college students seeking vocational counseling, counseled students would show more enlargement of temporal orientation than control students who were held out from counseling.

Method

Subjects and Design

Students ($N = 103$) requesting vocational-educational counseling from the Student Counseling Service at Iowa State University, were randomly assigned to treatments following a Solomon Four-Group design (Campbell, 1957). Approximately half the subjects filled out the instrument measuring temporal orientation at the beginning and end of a two-week interval while the others did so only at the end; approximately half received counseling during the interval while the others were held out. This resulted in four groups: pretested counseled, pretested held out, unpretested

¹This study was a portion of the senior author's master's thesis completed at Iowa State University under the direction of the junior authors.

counseled, and unpretested held out. Scheduling conflicts prevented equal Ns in the four groups.

Procedure

The temporal instrument was administered by a clerk. Five experienced vocational counselors were responsible for the counseling treatment: (a) exploratory interview to assess the student's problem, capabilities, attitudes; (b) administration of appropriate measures of interest, aptitude and personality; (c) interpretation of tests' results and discussion of a plan of action or decision. Administrative procedures were explained to the counselors before the study and on the day of the subject's second interview the counselor received a reminder to ask the subject to go to the clerk's desk after the interview. No attempt was made by the investigators or the counselors to modify or monitor any aspects of the counseling process. The counselors knew research was being conducted which required their cooperation; they were not informed specifically concerning the hypothesis and the nature and interpretation of the dependent measures.

Temporal Measures and Scoring

Temporal Words. The first measure was adapted from Brock and Del Giudice (1963, p. 92). The subject read: "In learning a foreign language, one begins with simple words. If you were telling a story in a foreign language, one that you just learned, which of the following words would you prefer? Circle ten of the words on this sheet. Choose the words that you feel would make your story better and easier to tell and understand." The words, presented in five rows of four each, were: MINUTE, WINDOW, YESTERDAY, SHOE, SCHOOL, DAY, DOOR, MONTH, WEEK, HOME, TOMORROW, ROOM, HOUSE, TIME, SAND, YEAR, SECOND, CHAIR, HOUR, DOG. The score was the number of temporal words.

Write-A-Story. The second measure was similar to the one used by LeShan (1952), Barndt and Johnson (1955), Teahan (1958), Davids and Parenti (1958) and Brock and Del Giudice (1963). The subject

read the following instruction. "Write a story using the *story beginning* printed below. In writing your story use at least half the page but no more than the whole page. Your story may be true or fictional but it should be interesting to you. Ignore spelling, grammar, complete sentences. *Story beginning:* At three o'clock one bright sunny afternoon in May, two students were walking down the Lincoln Highway." Sixteen 5½ inch lines followed the story stem. The score was the time span of the story in hours. In pilot research, the authors' judgment of story duration rarely disagreed (discrepancy of more than fifteen minutes) with the subject's own estimate when the subject was asked to write, after completion of his story, "How much time was involved in the action of your story—not in the writing of it, but in the action described?"

Projected Self. The third measure assessed what Lewin (1951, p. 75) has called the person's "psychological past, present, and future." The subject read: "You will read a series of sentence beginnings. Make as many brief completions (a word or two) as come readily to your mind. When you cannot readily think of any more completions, go on to the next page." Five pages followed. On each page, the sentence stem was repeated 24 times. The five stems were: "Today I am, Three years ago I was, Three years from now I will be, Ten years ago I was, Ten years from now I will be." The frequencies of responses to the five stems were the raw data used in computing $R = H/H_{\max}$ (Scott & Wertheimer, 1962, p. 108). In effect, a high score, high R , meant that the subject could verbalize about as many associations to himself in the distant past, near past, near future, and distant future, as when he considered himself contemporaneously. A low score, low R , would be obtained to the extent that the subject's responses to the five time stems were unevenly distributed. Since the subject was "compared with himself" the measure did not reflect verbal fluency. A complete description is given in Matulef (1963).

Results

The hypothesis implied that the counseled subjects would choose more temporal words than the held out subjects. Relevant mean scores are shown in Table 1. Analysis of variance² of difference scores (from rows one to four in Table 1) produced no significant outcomes. Analysis of variance of the

Table 1

Temporal Words: Means and Standard Deviations

Treatment	N	Males		N	Females	
		M	SD		M	SD
Counseled						
Pretest	19	3.57	2.16	7	2.85	1.21
Posttest		3.15	2.24		2.14	1.46
Held Out						
Pretest	15	3.73	2.37	5	4.60	3.36
Posttest		4.20	2.54		3.40	2.07
Counseled						
Posttest (only)	18	4.50	2.06	6	4.83	3.25
Held Out						
Posttest (only)	28	3.32	1.94	5	2.80	.83

post scores (rows two, four, five and six in Table 1) yielded only one reliable ($p<.01$) effect, an interaction: Pretested vs. Unpretested X Counseled vs. Held Out ($F = 7.11$; 1, 95 df). The unpretested counseled subjects selected more temporal words than the unpretested held out subjects (two-tailed $t = 2.43$, $p<.05$). If pre-

²All analyses of variance in the present study followed Walker and Lev (1953, p. 381).

testing was a major source of contamination, it could be concluded that the results lent support to the hypothesis.

The hypothesis suggested that the counseled subjects would write stories with longer durations than the held out subjects. The pertinent mean scores are given in Table 2 and the analysis of variance in Table 3. In support of the hypothesis,³ increase in story duration was greater for counseled than for held out subjects ($p<.01$) and, considering the post scores alone, counseled subjects told stories with greater duration than the held out subjects ($p<.05$).

Table 2

Write-A-Story: Mean Number of Hours and Standard Deviations

Treatment	N	Males		N	Females	
		M	SD		M	SD
Counseled						
Pretest	19	.79	1.06	7	2.19	2.23
Posttest		1.56	1.94		4.58	2.89
Held Out						
Pretest	15	1.53	1.78	5	.85	1.20
Posttest		1.33	1.71		.68	.75
Counseled						
Posttest (only)	18	1.44	2.13	6	2.39	3.58
Held Out						
Posttest (only)	28	1.29	3.11	5	.73	.59

³For both males and females, there was no reliable difference between pretest means of counseled and held out Ss.

Table 3

Write-A-Story: Analyses of Variance for Difference Scores and Post Means

Difference Scores ^a				Post Scores ^b			
Source	df	MS	F	Source	df	MS	F
Sex (S)	1	.6869	1.64	Sex (S)	1	.9450	1.38
Counseling				Counseling			
vs.	1	3.1810	7.49**	vs.	1	4.4118	6.45*
Held Out				Held Out			
(C)				(C)			
S x C	1	.6231	1.49	Pretested			
Error	42	.4181		vs.	1	.6646	1
				Unpretested			
				(P)			
				P x C	1	.6798	1
				P x S	1	.4920	1
				C x S	1	3.3449	4.89*
				C x P x S	1	.5776	1
				Error	95	.6845	

^aBased on rows 1 to 4 in Table 2.
^bBased on rows 2, 4, 5, 6 in Table 2.

* $P<.05$.
** $P<.01$.

Table 4
Projected Self: Mean Scores and Standard Deviations

Treatment	N	Males		N	Females	
		M	SD		M	SD
Counseled						
Pretest	18 ^a	.9766	.0211	7	.9579	.0508
Posttest		.9806	.0170		.9713	.0544
Held Out						
Pretest	15	.9585	.0426	5	.9551	.0378
Posttest		.9539	.0954		.9713	.0107
Counseled						
Posttest (only)	18	.9663	.0434	6	.9690	.0242
Held Out						
Posttest (only)	28	.9526	.0634	5	.9263	.0784

Note—The score is $R = H/H_{\max}$; see text.

^aA S in this group was omitted because he did not follow the instructions.

The hypothesis implied that vocational counseling would produce an elaborated temporal perspective so that the counselee could more easily envisage himself at times other than the present. Relevant mean scores are shown in Table 4. The directions of the differences (rows one to four) were consistent with the hypothesis but high within-group variability prevented any comparisons from approaching statistical significance. The post scores (rows two, four, five and six) showed a more substantial trend in the predicted direction ($F = 2.21$ 1; 94 *df*) but again, a satisfactory level of significance was not attained.

The writers next tested a *post hoc* prediction: vocational counseling augments future more than past temporal orientation. Using data from the Projected Self measure, the number of the subject's pretest responses was subtracted from his comparable posttest response to "three years from now," "ten years from now," "three years ago," and "ten years ago." Thus, for each subject, there were four pre-post difference scores, two for future time and two for past. To arrive at an index of the extent to which future increase exceeded past increase, past change (pre-post) was subtracted from future change for "three years" away, "ten years" away, and the two time distances combined. A positive score on this index meant that the subject's future increase, if any, was greater than his past

increase, if any. Positive scores were obtained for "three years" in 19 of the 25 counseled subjects and only 9 of the 20 held out subjects—a difference significant at the .08 level by a two-tailed test (Edwards, 1960, p. 53). Positive scores were obtained for "ten years" by 18 of the 25 counseled subjects and 11 of the 20 held out subjects; this difference was unreliable. When data from both time distances were combined, positive scores were obtained for 18 of the counseled subjects and 8 of the held out subjects; the corresponding two-tailed *p* was about .06. These data gave some encouragement to the hypothesis that, if it exists, a temporal enhancement effect of vocational counseling is specific to future time.

Finally, it was noted that the three indices of temporal orientation were uncorrelated, thus repeating the finding of Brock and Del Giudice (1963) and of most previous studies utilizing more than one measure (Wallace & Rabin, 1960).

Discussion

The results on the Temporal Words measure were ambiguous. Since reliable support for the hypothesis was obtained from the unpretested subjects, and these differences were reversed for the pretested subjects, pretesting may have been a source of contamination. The Temporal Words measure, unlike the other two, did not require

~~the subject's repeated repetition. Instead,~~
 he selected words from a list and doing this a second time may have seemed trite or tedious or both. The subject could have selected the same words on the posttest as he did on the pretest. If, for any reason, such a tendency existed, it worked against the hypothesized increase in choice of temporal words.

Counseling apparently enlarged the counselee's time perspective as measured by the increased duration of his fantasy productions. This outcome is congenial with current conceptions of the counseling process as an opportunity for the counselee to assess his plans, resources, needs, liabilities and immediate and long-term goals. Vocational counseling may help the counselee to verbalize previously undefined goals and roles. Making a decision about a long-term objective may require setting up intermediate goals; in this process time perspective could become better elaborated.

The fact that the obtained differences on the Projected Self measure, though unreliable, favored the hypothesis, was encouraging. A *post hoc* analysis showed that counseling enhanced future more than past temporal orientation. This result was considered a worthwhile working hypothesis for future research. Another obvious problem for further investigation concerns the relationship between counseling effectiveness and change in temporal orientation.

The importance of the major finding, change on some measures of temporal orientation as an apparent result of brief vocational counseling, transcends the counseling context. The results constitute the first demonstration of a treatment-produced change in temporal orientation. The effect was clear on the measure (Write-A-Story) which was similar to the Tell-A-Story tech-

nique frequently employed by previous investigators. The treatment, ~~from~~ counseling interviews with some interpolated vocational testing, was admittedly complex and impure. However, just such a complex experience may be necessary; the usual laboratory inducements and manipulations are probably insufficient to produce measurable change in temporal orientation.

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Counselor Competence, Interest and Time Perspective¹

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Participants of the 1961-1962 National Defense Education Act Guidance Institute at the University of North Dakota were evaluated by two measures of counselor competence, one interest measure (the High School Counselor scale of the Kuder Preference Record Occupational Form D) and two future and one past time perspective measures. The hypothesis that more competent counselors or those having an interest pattern resembling that of a high school counselor would have a longer future time perspective was partially confirmed by the Kuder D scores significant correlation with one future time perspective measure. The results also suggest that subjective judgments of counselor competence are not related to either time perspective or to the occupational interest pattern of a high school counselor.

Identification of personality characteristics associated with effective counselors has not resulted in any striking results. Tyler (1961) suggests that assessment instruments are more successful when utilized as negative predictors, i.e., indicators of probable failure. Positive characteristics may be extremely difficult to specify. The minimum qualifications for counselor competence which have been established tentatively include intellectual ability, emotional stability, nonrigidity and a minimum degree of hostility. Strupp (1962) indicates that "Personal integrity, humanity, dedication, and patience are probably crucial qualities but difficult to demonstrate by current psychological tests, which in other respects, too, are of relatively little help to the therapy researcher" (p. 450). Rioch (1960) also notes that a therapist must be able to give the client an opportunity to fully unfold his human potentialities.

Time perspective is a basic attitude of an individual which reflects a general

orientation to life. Schizophrenics have been described as having a timeless orientation whereas character disorders have been found to have a more circumscribed and restricted future time perspective (Lyons, 1963; Sattler, 1963a; Brandt & Johnson, 1955). Students who are either academically unsuccessful, pessimistic, or who have limited need achievement have been found to possess a limited future time perspective (Teahan, 1958; Siegman, 1961). Kastenbaum (1961) suggests that future time perspective might be regarded as that function of the individual which permits him to draw up a model of the future. The views concerning counselor competence and time perspective suggest that more effective counselors should have a greater future time perspective. The primary hypothesis was that counselor trainees either judged to be potentially more competent or at least having an interest pattern associated with that of a high school counselor will have a longer future time perspective. A secondary consideration was to evaluate whether past time orientation differentiated competent from less competent counselor trainees.

¹This study was in part supported by the University of North Dakota faculty grant-in-aid program.

Method

Subjects

The Ss were 28 of the 30 National Defense Education Act participants of the 1961-1962 Guidance Institute at the University of North Dakota.

Procedure

Two counselor competence variables, one interest variable, and three time perspective variables were utilized in the investigation. All measures were obtained during the last week of the Institute. The two counselor competence measures included the following:

1. The six members of the Institute staff rank ordered the Ss "on the basis of potential success as a school counselor." This averaged ranking was an attempt to evaluate overall ability as a future guidance counselor.

2. The six members of the Institute staff also were given the following instructions: "Rate each student as to his ability to establish a warm and understanding relationship with the following range of adolescents:

1	2	3	4	5	6	7	8	9
almost non	few	some		many		most	almost all	

The six ratings for each S were totaled and rank ordered. This measure, in contrast to the preceding one, was intended to measure counseling skill *per se*.

The interest measure was the score obtained from the Kuder Preference Record Occupational Form D for the High School Counselor scale which was then rank ordered for the total group. This variable introduced an objective index of counselor interest in that Ss showing an interest pattern similar to that of a high school counselor were seen as being potentially more accepting of their future vocational role.

The time perspective variables included the administration of two future time and one past time measure. The ten events method was selected as one of the future time perspective measures. The Ss were requested to "List ten events that refer to

things which you may do or which may happen to you in the future." After writing all ten events the Ss indicated their age when they expected each event would occur. A discrepancy score was obtained by subtracting the S's chronological age from each of the event ages and then obtaining the median discrepancy age as the future time perspective score. The second future time method employed the story completion technique. The Ss were presented with the following information: "About 3:00 o'clock one bright, sunny afternoon in May two boys were walking along a street near the edge of town." With this sentence as the starting point the Ss were asked to write a story. After completing the story the Ss were requested to write the length of time the events in the story covered. The past time perspective score was obtained by using the ten events method. The Ss were told to "List ten events that refer to things which you have done or which have happened to you in the past." A past time perspective score was obtained in a manner similar to the future time perspective score. Each distribution of time perspective scores was rank ordered. The three time perspective forms were administered to each S during one class period with a table of random permutations being used in assigning the order of forms for each S.

Results

The reliability of the overall ability rankings for the six raters was evaluated by the computation of Kendall's coefficient of concordance which resulted in a W of .80, significant at the .001 level. Table 1 presents the intercorrelations among the two counselor competence variables, the interest variable and the three time perspective variables, calculated by the Spearman rank method corrected for tied observations. The portion of the hypothesis that Ss having an interest pattern resembling that of a high school counselor would have a longer future time perspective was supported by a significant correlation between the Kuder D High School Counselor scale scores and the ten events future time scores.

Table 1
Intercorrelations between Competence, Interest and Time Perspective Variables

	Overall Ability	Counseling Skill	Kuder D ^a	Future Time (Story)	Future Time (Events)	Past Time (Events)
Overall Ability	—					
Counseling Skill	.84***	—				
Kuder D	-.09	-.15	—			
Future Time (Story)	-.01	.08	-.11	—		
Future Time (Events)	.28	.12	.50**	.05	—	
Past Time (Events)	.14	.15	-.20	.23	-.22	—

^aTwenty-six of the 28 Ss were available for the Kuder D.

**Significant at the .01 level.

***Significant at the .001 level.

The only significant relationship remaining is between the staff ratings of counselor overall ability and counselor skill *per se* which suggests that the raters were utilizing a similar frame of reference for both criteria. The correlation between overall ability and future time perspective measured by the ten events method does approach significance. It is interesting to note that staff ratings are not correlated with Kuder D High School Counselor scale scores, that the two future time perspective measures do not show a significant relationship and that past time perspective is not related to future time perspective.

Discussion

The results suggest that students in a guidance institute possessing a longer future time perspective are more likely to have similar interests to high school counselors than students with shorter future time perspectives. The generalizability of this finding to other groups of students (e.g., those planning to do graduate work in guidance and counseling) is difficult to make since the data was collected after a nine month intensive training program. The data did not provide the opportunity for evaluating whether similar results would

have been found at the beginning of the training program.

The study, in addition, does not indicate whether high school counselors have longer future time perspectives than other professional groups or whether more effective high school counselors differ on time perspective dimensions. However, the significant positive relationship between interest and future time perspective does suggest that future time perspective could have some usefulness in a predictive battery if further investigated and cross-validated.

The nonsignificant relationship among the temporal variables and rated counselor competence suggests that no specific time orientation is associated with a higher rating of predicated success. Two general temporal orientations in counseling may be present: (1) an orientation associated with immediate alleviation of symptoms or having the client make a decision which leads to some immediate fulfillment; or (2) an orientation associated with longer term goals with the counselor realizing that he may not receive any definite feedback from the client for a considerable period of time. Both orientations have in common possible client change and improvement, but the first orientation, in contrast to the second,

is characterized by a more present, immediate focus. Future research may indicate whether these two orientations characterize counselors in general or if one has a higher probability of success.

The Kuder D scores and the competency ratings showed a nonsignificant negative relationship raising a number of provocative questions. Is it possible that the interest pattern of counselor trainees has little relationship to future success in their chosen career? This has been generally the finding with interest inventories in populations more heterogeneous than the present sample (Darley & Hagenah, 1955). On the other hand, it is conceivable that the Kuder D scores could prove to be a more valid indicator of future success than staff ratings which may have been biased in some subtle manner. It is not possible to determine which of the above is a more valid conclusion since a measure of actual competency was not available at the time of investigation.

The low correlations among the time perspective measures suggest that, as concerns the future time methods, the two are measuring different dimensions of future time perspective. Both methods measure an extension dimension related to future time span with the ten events method measuring a concrete and personalized dimension in comparison to the storytelling method which taps a projective-type dimension. Sattler (1963b), using college sophomores and juniors as subjects, found that these two methods gave significant as well as nonsignificant correlations. Except for group differences, no apparent explanation

was available to account for the findings. The nonsignificant relationship between the past and future time perspective scores suggests that a person's future time perspective is not necessarily related to his past time perspective. The subtle factors underlying time perspective, as well as the time perspective methods themselves, are not very well understood.

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Three Dimensions of Counselor Encapsulation¹

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Three factors in counselor cultural encapsulation are discussed: (1) A tendency to stereotype members of a sub-culture in terms of the modal characteristics of that sub-culture—the reification of sociological data; (2) Inadequacies in counselor education programs—the implied assumption that classroom sessions and field experiences are likely to alter deep-rooted attitudes and beliefs on the part of the student counselor; (3) Counselor role definitions which foster rigidity of counselor performance—the inclusion of current tactics and practices in descriptions of the goals and role of the school counselor. Illustrations of the influence of these factors on practice are provided and suggestions for change offered.

There are many forces in modern American society which foster cultural encapsulation in a broad spectrum of activities and attitudes. This article will focus on factors which uniquely foster and perpetuate the cultural encapsulation of school counselors and which can be changed by the counselors' own efforts. Discussion will be limited to three of these factors: (1) The wholesale translocation of sociological concepts; (2) The untenable assumption that cognitive experiences are likely to significantly alter deep-rooted attitudes and beliefs in students of counseling; and (3) The error perpetrated by the definition of the counselor's role in terms of techniques, methods and theories rather than in terms of the desired outcomes of their activities.

Socialification

Counselors have borrowed wholesale from the sociologist. They have translocated his findings into their own sphere of concepts rather than attempting to amalgamate his knowledge with theirs. Discovering the modal characteristics of groups or classes within our society may well be crucial to the work of the sociologist. Naturally, traditional sociologists tend to write in terms of modality and it is not surprising that implicit in most sociology texts is the notion

that the modal characteristic of a group, particularly a socioeconomic group, is descriptive of each member of that group.

After exposure to these texts, counselors are prepared to "discover" certain values, attitudes and behaviors among their impoverished or minority group clients, and seem always a bit surprised when they don't . . . "He's so good in class—you'd never know he came from that kind of neighborhood." . . . "Mary keeps herself so clean—not like most of them." Of course, there exists on the part of the counselor and the counselor-educator a readiness to think this way long before they ever studied sociology, but such attitudes are reinforced and made scientifically "respectable" by statements like . . . "The lower class child typically is anti-school . . . Personal cleanliness receives less emphasis in lower class homes . . . The lower class home encourages aggressive behavior . . . The lower class child demands immediate gratification of his needs." The author is not in a position by virtue of any research he has done to deny the accuracy of such modal statements, but these statements do imply far greater inter-group consistency than research findings support.² Nonetheless, this

¹Presented at the 1963 American Psychological Association Convention, Philadelphia.

²The research of Coleman (1959), Brookover & Gottlieb (1963), and Bronfenbrenner (1958) certainly raises questions about the validity of social class modal differences.

reification of sociological data enables and encourages the counselor to maintain stereotyped images of the deprived and helps him avoid the "messy" business of really looking at his client. In this article the term *sociafication* will be used to describe this behavior.

Counselors are not the only ones guilty of this unfortunate translocation. Educators recently have advocated programs and procedures based at least in part on this error of sociafication. Concern is certainly warranted over the admonitions by educators that the curriculum for these youngsters must be quite structured; that routine must be very clearly established and carefully followed. Fortunately, these descriptions are usually so vague that they really describe nothing, and do little harm; but, they do seem to imply that the teacher must establish a relatively rigid routine and monotonous schedule. There is reason to doubt the validity of such procedures, for they may do even more harm than present programs do. Little seems to be expected of children in such programs; by its very nature it seems to say to a child, "We expect routine not spontaneous learning behavior from you." The research of Brookover and others (1962) suggests that anything which tends to damage or limit a child's academic self-concept may be *exceedingly* destructive. Before advocating programs based on modality, a great deal of research would seem warranted. Research of this nature should return to the original meaning of the concept that "the exception proves the rule," instead of validation through significant correlation. If even a minority of teachers are found who are spontaneous and creative; who don't know if they'll get to the arithmetic lesson this morning at 10:00 or next week sometime; who aren't really certain which paths the children and she will come upon and explore; if even a few such teachers and programs exist and work well with disadvantaged youth, then educators should be willing to reject the hypotheses that deprived youngsters need tight structure in

education settings. The author suspects that the success of a program is a function of a basic excitement and respect between teacher, child and knowledge; not the structured organization of these variables into discrete time intervals.

Although counselors have allowed themselves to think in terms of sociological modality, they have had a good deal of difficulty living with this error. Notice recently the continuous shifts in the titles assigned kids from the other side of the tracks—the lower classes, the lower-lower classes, the poverty stricken, the culturally deprived, the disadvantaged, minority group youth and a host of others. None of these rubrics is widely accepted because *none* adequately defines the child who resists attempts at socialization and appears headed for a life of misery to himself and others. Each of these rubrics encompasses groups in which large numbers of individuals will become productive, well socialized human beings. Arguments about the fallacy of the rubrics frequently culminate with, "Hell, you know the kind of kid I mean." And, indeed, there does appear to be some base of common meaning among teachers, counselors and psychologists; but they have been unable to find definitions which are more precise and meaningful in terms of the goals of education, or to deduce formulas which will facilitate examination of the behavior of individuals within groups.

Earlier in this article it was implied that sociafication is a *motivated* error. There is a sort of middle class ethnocentricity at work here, in addition to an historic-economic hangover. Social scientists are as guilty of this ethnocentricity in their presentation of research findings as counselors are when they translocate and act upon these findings. For instance, "the lower class child tends to demand immediate gratification of his needs—he has difficulty in postponing gratification." The implication, of course, is that middle class folk do postpone gratification. Nonsense! They receive constant reinforcement and a my-

riad of rewards for following the "right" pathways and imitating correct behavior.

There is no quick and easy solution to this problem. Arthur Vener, a sociologist, and the author have struggled many hours to devise more appropriate models in the education of counselors. The result of their formulations is most embryonic; but did result in the introduction of at least one productive innovation into The Michigan State University Summer NDEA Institute. This group had as its purpose the study and improvement of their counseling skills with deprived children. It was required of the counseling trainees that as they observed and counseled students in the laboratory, as they accompanied youth board police officers on home and neighborhood visitations, as they conducted group counseling sessions with prison inmates; that they did not describe nor even refer to the class status of the individual as they wrote up their experiences. Instead they were asked to make the following assumption: that today all children within modern American society, with its extensive mass communication outlets, are well aware of what the culturally defined goal acquisitions of our society are—the car, the house, clothes, a handsome mate, et cetera. With this assumption in mind, they were asked to next determine if the individual learned quite early in life that opportunities for him to acquire these culturally defined goals were more limited than for the dominant groups, because of his religious, racial or economic group membership. With this assumption, and an affirmative reply to the primary condition, students were next asked to examine and describe the home, peer group and neighborhood influence on the basic directions the client set out on; for instance, was his theme, "I'm going to make it anyway," or had he substituted fantasy goals for relatively attainable ones or had he overtly or covertly chosen illegitimate means, etc. It is believed that this approach forced the students to look closer and harder and come to know their clients far better than if they had been allowed to

refer to the economic motivational patterns of these people in terms of encompassing or not encompassing specific modal lower socioeconomic class values. A typology based on the individual's orientation to such variables as home, peer group and reaction to the realization of limited opportunity, would at least contain several sub-groups for each socioeconomic class.

Poof

The *Yes-But* syndrome is a second major dimension in counselor encapsulation. Recall the story of the New Yorker lost in the Sahara Desert—near death from thirst he finds a lamp and rubs it. The usual genie appears and offers the usual wishes. "Oh, genie, I'm so thirsty, please make me a malted." True to his promise, the genie summons his powers and proclaims, "Poof, you're a malted." Counselor-educators provide their students with a series of cognitive and semi-cognitive experiences and after a magic number of graduate credits is accumulated, magically "Poof, he's a counselor." Sometimes the programs do get at the core of the counselor's being. Most do not. For example, the counselor fully "understands" that hostility is a natural consequence of certain developmental stages and environmental conditions but let an angry student enter his office and respond to the counselor's inquiry with, "Drop dead," or a glaring, angry silence, and somehow the counselor's response is seldom congruent with his stated theoretical position on the needs of adolescents. Counselor-educators must enable, perhaps require, trainees to examine in depth their attitudes about clients and about themselves. The experiences of the NDEA trainees at Michigan State may prove illustrative. By and large they were an unusually talented, experienced group of school counselors; nevertheless, as they became involved in group counseling in the role of client, comments like these were confessed and explored, "I offered the kid a cigarette. He says, 'You don't mind do you?', and he takes three. That darn kid is really laughing at me when he does this, he's making me look

like a monkey. I felt like a fool." And another, at a different level of exploration, "As I think about the areas in which I attribute all kinds of evil attitudes to some of these kids we've been working with, I can't help but wonder if these same things I attribute to them aren't really related to the kinds of values which I, myself, only very tenuously hold." It is not realistic to expect counselors to be paragons of emotional perfection but they dare not be so restricted that their fear and anger destroys their potential to help a number of clients.

Tactics and Purpose

The last of three factors to be discussed is the peculiar kind of professional encapsulation which has resulted from the very manner in which counselors have defined their job. Counselors talk in terms of one-to-one relationships in a private, quiet place. They talk about full time assignments. They talk about allowing children to express their feelings in confidence. They talk about providing information about colleges and occupations, et cetera, et cetera. It is unfortunate that the counselor's professional role is defined on the basis of current tactics. How much better it would be to define the job in terms of the outcomes sought and the areas of human potential to be enhanced.

The tactical, situational definition can and does discourage counselors from exploring new methods. For instance, resistive clients who tend to fear, or distrust school personnel often become very communicative in group counseling situations. This is particularly true of the disadvantaged and delinquent. There is a certain security in observing that the counselor is outnumbered, and that one does not need to fear peer disapproval when a sample of one's peers are in there, too. Counselors, however, tend to balk at such procedures insisting on seeing counseling as a one-to-one relationship. Emphasis on professionalization of the counselor certainly encourages the counselor's image of himself as a gentleman in a suit behind a desk. Prison inmates have stated, however, that if their high

school counselor had really been as interested in them as he claimed, he would have come into their neighborhood once in a while and interacted with them without a tie on his neck or the power of the school at his finger-tips.

Two other highly questionable job definitions hinder the attainment of successes. First, counseling should be initiated by the client. There are any number of students in schools who need help and would become clients if only they did not have to initiate the relationship. Second, counseling is an affect oriented experience. The neurotic college sophomore with the secondary gains of his defenses may well require a different set of counseling conditions than an adolescent who is searching for identifiable role models and an extended behavioral potential to stimuli which surround him. He may quite accurately perceive the reality of the negative stimuli which surround him (various authorities in his life do treat him "like dirt"), but he may be literally ignorant of the host of productive coping techniques available. In effect, then, he may need less to explore the S-Factors in the S-R paradigm and need more to learn about the potential R's.

To summarize we will report to you a few things which were learned from discussions with kids from slum areas and segregated neighborhoods. Most do not know who their school counselor is. Others describe counselors who smile sweetly but somehow communicated a real lack of interest in listening to them or discovering what they were all about, "They don't even look at you." A few spoke of counselors who may well have genuinely wanted to help, but who were not trusted. "Why should I have believed this guy, nobody else ever wanted to help me unless there was something in it for them." And finally the indignant young man who said, "I went to see him because I couldn't stand my English teacher, and all he wanted to do was talk about my mother."

Sociafication and ethnocentricity, fright and a technique oriented job definition are

the three most basic elements in counselor encapsulation. They limit our effectiveness with a large number of clients. It is suggested that here are the places where change is most needed, and where counselors and counselor-educators can effect change through their own efforts.

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Ideology and Counselor Encapsulation¹

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Counselor isolation from social realities, a cause of recent self-criticism, is analyzed in terms of the forces impinging on this, as on other, professions during its lifetime. At its inception counseling was part of the movement to raise the educational and social level of the community. With the passing years the concepts that determine practice and research were influenced by an ideology that tended to resist change. Man came to be thought of as static, his potential largely predetermined, his capacities fixed. There was movement from the real to the "safe" intrapsychic world, from commitment to nondirection. The realignment of social dynamics now requires a reassessment of the prevailing ideology.

Of late, some writers in counseling and guidance have directed their professional self-criticism against alleged social naivete. Before a discipline becomes preoccupied with breast-beating and the chanting of its *mea culpa's*, it seems appropriate to consider whether it is deserving of blame. Why should counselors not be encapsulated? For what reasons ought they to be different from others, from those professions which are no more open to dissonant stimuli in their professional-perceptual field? No less than others they too are victims of their peculiar history and more especially of those social forces operating upon them during the course of their professional lifetime.

Counseling and guidance mark their birthdate as sometime after the turn of the century. One of the most succinct characterizations of the birth of a profession was made by Snygg (1954, p. 130) when he was writing about educational psychology: "It was no accident," he said, "that compulsory education laws were soon followed by Thorndike. Confronted for the first time with large numbers of pupils who were not prepared to learn what the teachers were prepared to teach, educators turned to psychology for help."

Was it not the same new population of students and out-of-school youth that stirred the interest of Frank Parsons in Boston and Eli Weaver in Brooklyn, and countless others? A multitude of forces had combined to make this the moment in history when taxes would come from the pockets of the rich, and money from the coffers of the community to provide the high education that Americans had been clamoring for for a century or so, the loudest voices having been those of the trade unions, workers and immigrants. These new breeds of students needed to be understood, respected, tutored and guided, and their needs struck a respondent chord in men and women who were humanists not technicians and who sought to encourage the hopes and aspirations of young people whose parents could offer them little in the way of educational and vocational guidance. Parsons was many things, but among them he was a muckraker immersed in the great issues of the day, fighting for social change. This was no culturally encapsulated counselor out of touch with the realities that molded men's lives.

Those were the happy and noble beginnings. It was a day of great hope for the common man when it seemed that free universal education would carry the nation beyond the promise of a doctrine that all

¹Presented at the annual meeting of the American Psychological Association, August 30, 1963.

men are created equal. But just as some forces were at work to open wide the opportunity for the intellectual development of all people there were others seeking to slam the door shut. The concerns of those who over the centuries feared universal education are implicit in the following order issued by the King of Prussia in 1854 and the ideological rationalization is quite explicit:

The primary schools have only to work to the end that the common people may grasp and appreciate the Christian Faith . . . may be intelligent in regard to all matters within the narrow sphere to which God has called them . . . may learn to read and write, reckon, and sing . . . may love their rulers and their fatherland, be contented with their social status and live peacefully and happy in their lot . . . I do not think the principles enunciated will raise the common people out of the sphere designated for them by God and Society.

Dahlke (1958, p. 72) explains that with this order the King formalized the existence of a dual school system, "one part of it designed to keep people in the lower classes in their low status and the other to provide for an elite" (p. 73).

Prussia is not the U. S. and the King is long dead. But as Mannheim (1936) has so masterfully elaborated in his work on the sociology of knowledge, there are at all times and in all intellectual enterprises those whose ideology is intended to maintain the status quo and those to change it. Our world is always in movement, our natural and social environment constantly changing. Those whose ideology maintains conditions as they are must necessarily become encapsulated, and by the process of selective inattention deny the existence of significant reality impinging upon them. While we need not examine the social dynamics that were operating against change in our country, in our schools, and in the attitudes of our professional personnel, we must examine the effects of such pressures on the theories we adopted, and on our practices. We will observe the tendency to think of man as static, his potential largely predetermined, his mental capacities fixed;

and we will note that the practices themselves provided "confirmation" for the theories that gave rise to them.

1. *Intelligence tests.* In 1909, Binet deplored the fact that ". . . some recent philosophers appear to have given their moral support to the deplorable verdict that the intelligence of an individual is a fixed quantity . . . we must protest and act against this brutal pessimism" (Hunt, 1961, p. 13). Despite Binet's clear declaration to the contrary we continue to regard these instruments as evaluating capacities that are largely fixed by the genes. Hardly anyone today will deny the importance of life experience in the realization of potential, but it is still "potential"—some combination of qualities released within the germ plasm—that sets the limits. Already there is fixity at the moment of conception. This is a scientific and professional outlook that inevitably determines the questions that investigators will pose and the strategies of practitioners.

2. *The "normal" distribution of intelligence.* No professional myth has wider currency than this one. Test constructors know they can obtain any distribution they want and they appreciate from actual experience the effort entailed in achieving a normal curve. With a test so designed the resultant distribution is of course "normal." And over the years in a classic case of circular reasoning many persons have been led to conclude that indeed this is a biological fact! Nature has so ordained the distribution of intelligence.

It is striking that Francis Galton first applied the bell-shaped curve to the study of individual differences at the time when the already beleaguered British aristocracy was defending its elite position and privileges against the onslaught of the lower classes. Unwittingly, Galton supplied the British establishment with "scientific" support for the highly differential educational structure that is under severe attack today.

3. *Homogeneous ability grouping.* An outgrowth of conceiving of man's mental abilities as largely immutable, the practice tends

to confirm the belief. By use of this educationally indefensible system the learning handicaps of the socially deprived children are intensified. The gap between the deprived and the advantaged children widens each year, and the attitudes of the lower class children concerning their own inferiority is only confirmed. Instead of encouraging and strengthening students by a professional orientation that works through diagnosis and remediation this practice stamps them as irrevocably limited.

4. *Progressive education.* In this context the term is used loosely to refer to all those educational theories that operate on the assumption that given permissiveness in kindergarten and the grades, children will have the opportunity for the unfolding of their abilities. Exercise care, teachers were cautioned, lest the fragile structures of the child be shaken by the manipulations of the adult. For many middle class children raised by parents who valued learning and culture and who provided the necessary intellectual stimulation through experience and conversation, this school practice was probably not a serious handicap; but for others, for vast numbers of those who flocked to the schools, this procedure was bound to doom most of them to the limits set by their disadvantaged environments. They needed well organized instruction in the concepts and cognitive processes that the fortunate receive before they enter school—the prerequisites to reading; deprived of the necessary corrective measures they lapse into disinterest and resistance to learning.

5. *Psychoanalytic theory.* Man is a victim of his animal instincts. Deep in the recesses of his mind are anti-social tendencies, sometimes encapsulated in his unconscious. So much are these a part of man, Freud thought, that in his letter to Einstein he expressed the fear that wars were a result of them. Once again man is a prisoner, and many a boy's aggressive behavior is explained in terms of an inscrutable unconscious rather than remediable social conditions. And this thinking persists despite the history of man that demonstrated his ability

to transform a foot to a hand, to make tools, to work in social cooperation and to develop speech. Hardly an immutable being! It is not parsimonious to attribute this progress to the fact that libidinal energy was properly sublimated and discharged. It is much more tenable to reason that man wrought these changes because he consciously sought them in his struggle to master his environment. When there is a failure in the use of "energy" (e.g. psychopathology), one can find as much profit in searching for the social contradictions that are reflected in the intrapsychic conflict.

6. *Conformist thinking.* The traditionalists in the intellectual community have provided the ideological foundations for their times. The creative scientists and philosophers, the innovators like Galileo, Bruno, Darwin and the many other thinkers whose views diverge from the norms often represent a threat to the status quo and are treated in kind. The prevailing social climate knows no bounds and reaches into the intellectual and professional communities despite the protestations of intellectuals that their thinking is "independent," or even of scientists that their science is "pure." Aseptic perhaps it is, but not pure or independent, as the experiences of the 1950's demonstrated. In their study of social scientists, Lazarsfeld and Thielens (1959) indicated the price paid during a decade when professors deliberately avoided introducing topics that were part of the course and suppressed discussion that bore on controversial issues. The situation in the public schools was so bad that Riesman (1958) proposed that the social studies be dropped altogether.

In clinical and other fields in psychology there was a tendency to turn away from the individual's behavior in a real world to reflect on those safer areas of contemplation like intrapsychic conflict, as if this could exist independent of external conflicts. And in counseling the tendency during this period was to turn from commitment to nondirection in interactions. Thereby was the counselor absolved of the re-

sponsibility of making interpretations, of introducing new data (facts, values, mores), for now as an expert in empathic communication his task was to reflect and clarify only that which came from the client, for which the client alone was responsible. By choosing this direction he shut himself off from relevant areas of observation and thus set himself adrift from the mainstream of scientific investigation. No matter how sophisticated his research endeavor, so long as it focused on communication and self-perception it could not inform him about the learning and attitudinal effects of the following:

- a) undetected minimal neurological and sensory defect;
- b) low social-economic status;
- c) denigrated social role: sexual, racial, ethnic.

Problems arising from such causes are bound to evoke symptoms of frustration and conflict, and negative attitudes to the self. Treating the symptoms is a common and often fruitless activity; yet it is the counselor's only recourse when he is trained to delimit his field of operations to the client's percepts and concepts, and when the research largely ignores the material substrata of these cognitive processes, and the dynamic nature of the social milieu.

These are some of the concepts and conditions that helped shape the ideology of the counselor. He did not will them; no one person nor set of persons was responsible for them. By a selective process the theories that informed his professional behavior prevailed over other competing theories and willy-nilly they served the purpose of de-

limiting possibilities for change both within the profession and on the clientele it served.

Now the times have changed and a new set of forces are at work, as close at hand as today's headlines. Comparable to the insistent demands that opened the high schools to new classes of people, the demonstrations of the past years will change the composition of the schools and will make new demands upon teachers and adjunctive workers. Once again the social forces for change emerge stronger than those for no-change. Historically this is a time for a profession to evaluate its theories and divest itself of the old ideology which now in the new set of conditions impairs its service to the community.

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Self-Concept of College Women Compared with Their Concept of Ideal Woman and Men's Ideal Woman

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The nature of specific feminine beliefs was studied by administering three forms of the Inventory of Feminine Values to 75 women attending a large metropolitan college. S's were first asked to respond as they felt, then as their ideal woman would respond, then as men's ideal woman would respond. Data indicate that women perceive themselves and their ideal woman as essentially alike, with equal components of passive and active orientations, but they perceive man's ideal woman as significantly more passive and accepting of a subordinate role in both personal development and place in the familial structure.

For the past two years a research project to obtain empirical data on feminine values has been conducted at the Society for Psychoanalytic Study and Research. The basic hypothesis of the research is that despite differences in socioeconomic class, ethnic or racial background, level of education, and occupational or professional status, women share a set of life values. To test this hypothesis the Inventory of Feminine Values¹ is being administered to samples of women differing on these variables to see if a common response pattern will emerge. This article shall report the first data collected in the spring of 1963 from a sample of 75 young women attending a metropolitan college in a large Northeastern city.

¹The Inventory was developed by Dr. Alexandra Botwin. It is discussed in detail in a study by Steinmann (1963).

Subjects

Subjects were students in undergraduate courses in Psychology who were asked to complete the Inventory as part of their class work, without special introduction. All subjects were females between 17 and 21 years of age, the majority unmarried. Most were white, and on superficial examination were considered by their instructor to represent middle class or upper-lower class in socioeconomic status.

Instrument

The Inventory consists of 34 statements expressing a particular value or value judgment related to women's activities and satisfactions: for example, "I am not sure that the joys of motherhood make up for the sacrifices." The respondent indicates the strength of her agreement or disagreement to each statement on a five-point

scale, ranging from "completely agree" to "completely disagree" through the midpoint of "I have no opinion."

Seventeen of the 34 items are considered to provide a respondent with the opportunity to delineate a passive woman, that is a woman who sees her own satisfactions coming second after those of her husband and family, and who sees her family responsibilities as taking precedence over any potential occupational activity. The other 17 items delineate an active woman, one who considers her own satisfactions equally important with those of husband and family and who wishes to have opportunities to realize any latent ability or talent. The items are alternated on the instrument, making it possible to score the instrument by utilizing the respondents' answers to the 17 pairs of items. The score on the Inventory represents the difference in strength of agreement to each pair of items. Positive scores between 0 and +68 represent intermediate degrees of a passive orientation, negative scores between 0 and -68 represent intermediate degrees of the active orientation.

The reliability of the Inventory has been estimated through the split-half technique, and when corrected through the Spearman-Brown procedure, is .81. The items have face validity in that they are statements with generally accepted connotations, but they have also been submitted to validation by seven judges and counter-checked by clinical interviews.

Three forms of the Inventory were used in the current research. First, subjects were asked to respond to the items in terms of

how they themselves felt, i.e., their self-perception, or Form SP. Then they were given the same 34 items in scrambled order and asked to respond as they thought their ideal woman would respond (Form WI). The third time, with the items again scrambled, they were asked to respond as they thought men would want women to respond (Form MI).

Results

Table 1 presents the range, means and standard deviations in total score on each of the three forms. On Form SP, self-perception, respondents ranged from -32 to +36, with a mean of +.97 and a standard deviation of 14.8. Thus their own opinion, as a group, was equally balanced between passive and active elements; moreover, 43 of the 75 respondents had scores within 8 points of 0.

On Form WI, responding as their ideal woman would, they ranged from -44 to +31 with a mean of -4.6, which indicated, on the average, a slightly more active preference than they actually were (statistically significant at the .01 level).

On Form MI (to which subjects respond as they think men would want women to respond), Table 1 reflects the dramatic shift of the data. The mean of +20.3, the range from -12 to +54 as well as the fact that 69 of the 75 subjects had positive scores, all reflect the strength of the passive image these college women had of the woman that men desire. Obviously, there were statistically significant differences between the means on Form MI and those on Forms SP and WI.

Table 1
Range, Means and Standard Deviations
in Scores on Inventory, by Form

Statistic	Form		
	SP	WI	MI
Range	-32 to +36	-44 to +31	-12 to +54
Mean	+.97	-4.6	+20.3
Standard deviation	14.8	17.2	15.1

Thus, these data for the total group on the three forms combine to delineate a group of college women who see their own role almost equally balanced between passive and active elements, who have an ideal woman somewhat more active and self-assertive, but who think that men want a woman who is extremely passive and who places wifely and familial duties above her own development and who seeks her satisfactions in these duties rather than in her own personal and professional development.

A second level of analysis is in the 34 concepts which make up the instrument. The median strength of agreement was computed for each for each item and the items ranked for each form. A study was then made of the greatest differences in ranks between Forms SP and WI and between Forms SP and MI. Two kinds of differences were possible—the item was ranked lower (agreed with more strongly)

on Form SP, or it was ranked lower on Form WI or MI.

Before proceeding to discuss these differences, it is important to note that these were primarily differences in the *strength of opinions*, rather than in expression of diametrically opposite opinions. For example, on 31 of the 34 items the medians for Forms SP and WI were on the same side of the neutral point of 3. Similarly, the medians for Forms SP and MI were on the same side of the neutral point for 27 of the 34 items. All of the differences discussed below reflect differences in strength of opinion.

Referring now to Table 2, the first finding is in the four items which ranked lower (stronger agreement) on Form SP compared both to WI and to MI. In terms of content these are concepts involving the respondent's tendency to argue against authority, her belief that a wife's opinion

Table 2
Items on Which There Were Largest Differences in Rank
Between Form SP and Forms WI and MI

Nature of difference	Item no.	Item content	Rank on Form:		
			SP	WI	MI
A. Strength of Agreement on SP Form Greater	12	I argue against people who try to assert their authority over me.	11	23	24
	24	I believe that a wife's opinion should have exactly the same bearing upon important decisions for the family as the husband's.	2	13	23
	20	A working mother can establish just as strong and secure a relationship with her children as can a stay-at-home mother.	3	14	25
	4	I would like to create or accomplish something which would be recognized by everybody as valuable and important.	7	17	21
B. Strength of Agreement on SP Form Less	25	I will have achieved the main goal of my life if I rear normal, well-adjusted children.	16	8	
	26	I am more concerned with my personal development than I am with approval of other people.	13	5	
	11	I prefer to listen to people talk rather than do most of the talking myself.	17	10	
	17	Unless single, women should not crave personal success but be satisfied with their husbands' achievements.	29		9
	3	A woman who works cannot possibly be as good a mother as the one who stays at home.	28		14
	33	I believe a woman's place is in the home.	22		8
	13	Marriage and children should take precedence over everything else in a woman's life.	15		2

should have equal status with a husband's, that working mothers can be sound mothers and the respondent's expression of a need for creativity. These would seem to be the areas in which conflict between Self, Ideal and Man's Ideal Woman are most strongly expressed.

The other seven items presented in Table 2 reinforce these ideas. For three of these (items 25, 26, and 11), the subject felt her Ideal Woman would more strongly agree than she would. These three items again touch on child rearing, personal development and the respondent's willingness to listen. Here respondents feel their Ideal Woman would be more likely than they to see the rearing of normal children as life's main goal, with listening rather than talking and with seeking self rather than others' approval.

Finally, the four items on which they felt Man's Ideal would more strongly agree than they would (items 17, 3, 33, and 13) reflect not craving personal success and believing that the primary place a woman should concentrate her efforts is in the home with her husband and family.

Interpretation

What is the meaning of these findings? They seemed to indicate a shift in orientation between a slightly passive Self-Concept to a more active Ideal Concept. These data suggest some intra-psychic conflict, for the woman's Self-Concept is not the same as that which she thinks she *should* be.

The trend in six of the seven items cited in Table 2 (12, 24, 20, 4, 25, 11, 21) is self-assertive: the Self feeling that I *can* and want to do—and the Ideal feeling that I may not and should not do. The confusion here might even be a confusion of self-identity or ego-identity, reflecting antagonism within the self-image. This confusion is similar to the confusion of ego-identity as described by Erikson (1959) and may lead to what Erikson calls ego-diffusion, a serious personality disturbance.

Conflict looms larger when we compare women's Self-Concept and Ideal Concept with what they think Man's Ideal Woman is. As noted above, Table 1 displays extreme differences in concept. These young women seem to have convinced themselves that men want them to play a passive role.

The responses to individual items demonstrate that women feel that they *can* combine self-achievement with the roles of wife and mother. However, the data also indicate that the women feel that men are either not interested in the self-realization and goals of the women in their lives or these men may even be in opposition to woman's needs.

A conflict and/or lack of communication is obvious. The task before counselors in order to counsel more effectively, is to investigate thoroughly the two opposing forces between men and women and within the woman herself. These opposing forces are, of course, self-effacement and self-realization. Research must be directed to answer the question which of the forces, or what kind of amalgam of these forces, is more in line with reality.

Discussion

Clinical experience has shown that in order to maintain an emotionally dynamic and healthy attitude toward life, a woman must continually develop deep reservoirs of intellectual and spiritual strength. The job of the counselor, granted the unique privilege of being able to influence young people at such a crucial stage in their development, should emphasize the desirability of planning far-reaching programs of intellectual and vocational interests commensurate with each young woman's real and potential ability.

It might be borne in mind that the counselor should not limit such counseling to women alone. If further research indicates that men do not accept the active aspects of women's role, it is imperative for counselors, as well as schools, to help educate men toward acceptance of women's need for self-realization and also toward accept-

ance of the vocational and professional activities of women as an integrated part of women's lives. As women find and develop fresh interests and deep enthusiasms, the growth of their families will be richer and healthier, strengthened by the satisfaction of the mother. If research shows that men do accept the active aspects of women's needs, then it is incumbent on counselors and others to help break down the communication barrier which has led women

erroneously to believe that men do not wish them to activate their creative potentialities.

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Attitudes toward Career and Marriage and the Development of Life Style in Young Women¹

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A first approximation to the relationship between 18 attitudes toward career and marriage and the life styles of 1,237 girls and young women (67 per cent of those sought). Cross-sectional representation of the developmental stages of early adolescence, adolescence and young adulthood. Life style represented by: (1) high school curriculum elected; and (2) plan for education, career and marriage throughout a decade ahead.

Effect of attitude towards career and marriage differs in the three developmental stages. A pseudo-career drive seems to appear in some women during early adolescence. Major attitudinal themes affecting life style during early maturation are (in order of importance): (1) woman's impression of the male's reaction to the use of her intelligence; (2) struggle over the possible position of dominance of men at work and the "place" of women at home; (3) conflict between family and work demands upon the time of a wife and mother; (4) dilemmas of timing in dating and marriage; and (5) issues in acceptance of the general outline of the feminine role.

The present study explores the effect of attitude toward career and marriage upon the developing life style of a young woman. Attitude toward career is viewed in relation to life style in order to clarify further the understanding of both. Attitudes can influence decisions; decisions can be followed by actions; actions define life style. This is the assumption which leads us to say that life style is affected by attitude. The primary purpose of this paper is to provide

a preliminary chart of the effect, if any, of attitude toward career and marriage on the life style of women as women progress through adolescence and young adulthood.

The woman's dilemma of choice inherent in career and marriage has been widely considered. Furthermore, the public is interested in the presumed conflict of career and marriage in the woman's life situation in this country. Nevertheless, the specific focus of this study—the dependence of life style upon attitudes toward career and marriage—seems unique. We have not located similar studies (Matthews, 1960).

Design and Limits of the Study

The developmental effect of attitude toward career and marriage upon life style occurs as a person ages. A longitudinal study of persons at various points in a time interval provides the most complete kind of record of the developmental problem. How-

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ever, the present study is not longitudinal; instead it is cross-sectional and therefore only an approximation of the ideal. Nevertheless, our approximation provisionally locates the trace of the developmental effect in the nomothetic situation if our subjects may be considered matched in relevant ways at the several periods of age considered. Since there is no guideline for matching, because there has not been previous study of the problem either longitudinally or cross-sectionally, we could not control in ways which may later prove to be desirable. Furthermore, our procedure for collecting data led to the loss of subjects whose characteristics are not known. These are important limitations on the credibility of this approximation to what may be happening as attitude toward career and marriage gives definition to the life style of young women in their movement through adolescence into young adulthood. We can only know that these potential restraints exist at the moment; unfortunately we cannot evaluate them.

The primary variables of this study are: (1) 18 scores of attitude toward career and marriage; (2) two scores of life style; and (3) developmental stage. Major interest is in developmental stage. The report is therefore organized so that the effect of development upon the relation of attitude toward career and marriage to life style becomes apparent.

The analysis proceeds in two phases. In the first phase, the relationship of life style to attitudes toward career and marriage is examined by means of discriminant analysis (Tatsuoka & Tiedeman, 1954) for each of the two independent variables of life style (curriculum studied in high school and marriage and career plan for the next ten years of life) considered separately and together. In the next phase, the effect of developmental stage on the relationship of life style to attitude toward career and marriage is also analyzed by means of discriminant analysis. The analysis of this phase first ascertains whether attitudes themselves vary with developmental stage or not. The analysis then proceeds to ascertain whether

development has an effect upon the relationships between life style and attitudes or not.

Subjects and the Construction of Their Scores

Subjects. The sample consisted of girls and young women who were attending or had attended the Weeks Junior High School in Newton, Massachusetts, at some time during the years 1943-58. This sampling procedure provided cross-sectional representation of ages 11 through 26, a range later considered only in terms of three stages: junior high school, high school and young adult. The sample of girls is considered representative of each stage because we know of no violent shifts in the socioeconomic levels, races or religions of residents in the district of the Weeks School during the period. Each of these variables is likely to have an effect on both attitudes and life styles.

Procedures. The materials were administered under direct supervision in the junior high school. Each of the senior high school and adult subjects worked on her own materials at home, however.

The materials consisted of a career-history sheet and a set of attitude scales. The career-history sheet requested information appropriate to the age and life position of the respondent. Data were assembled with regard to: age; education; high school curriculum; occupation; marital status; subject preferences; career preferences; and life plans in 2, 4, 6, 8 and 10 years.

Returns. Usable replies were received from 1,237 subjects out of a possible 1,842, a response from 67 per cent of the subjects. Consequently, the sample consists of 432 junior high girls (mostly ages 11-14), 282 senior high girls (mostly ages 15-18), and 523 young adult women (mostly ages 19-26). The percentages of response for the three age groups were: junior high school (early adolescents), 94.3 per cent; senior high school (adolescents), 79.6 per cent; and young adults, 50.9 per cent.²

Attitudes toward Career and Marriage. The attitude scale in the form administered consisted of 71 items originally considered representative of seven attitudes. The items were assembled in the booklet in a random sequence in an attempt to break possible response sets.

²Histories were accepted anonymously because we wanted to encourage participation in the research without deception of our subjects and with a minimum of threat to them. This decision prevents comment on the characteristics of the non-respondents. A large loss in the group of young adults occurred because of changes in names and locations which were no longer a matter of record. The fractional return accumulated brings the representativeness of the adult sample into question but we lack information which can resolve doubts on this score.

Items within each scale were phrased to produce, in theory, a marriage-directed response. Several items with an obversely oriented framework were included in each of the original scales to check the consistency of use of the marriage-directed or career-directed responses. The intensity of the response in the marriage or career direction was measured numerically by a Likert-type procedure and every response of agreement (agree a little, agree pretty much, agree very much) was assigned a numerical value on the scale 1-7. The number "4" was arbitrarily assigned when a response was not given.

The intercorrelations of the item scores were studied in their entirety before final scores were constructed for item scales. Intercorrelations were computed for each of the three developmental stages under consideration in order to reduce the possibility that developmental effects in relationships might be covered up as scores for the scales were constructed. Both authors engaged in a cluster analysis of the intercorrelation matrices and worked toward agreement on 14 scales built from an aggregate of 57 of the original 71 items. In general the procedure separated new sub-sets of items from the original logical sets of items in order to create sub-sets of greater homogeneity of response pattern i.e., sub-sets in which item responses in a new sub-set were more highly correlated among themselves than with item responses in all other sub-sets. In a few instances an item was transferred from one of the original sets to a different one of the new sets but this was only done when it then seemed sound logically as well as empirically.

After cluster analysis, scores were constructed for each of the fourteen attitude scales finally chosen by summing algebraically the scores on the items of the set. The scores and the number of items in each set are as follows:³

Scale No.	Scale	No. of Items
I. The respondent's attitude toward:		
1.	A. College, career, time of marriage as <i>peers</i> ⁴ are presumed to feel	4
2.	B. Time of dating and marriage as <i>parents</i> are presumed to feel	6
3.	C. Children	4
4.	D. Homemaking	4
5.	E. Inferiority of the woman to the man	3
6.	F. The equality of the sexes	2
7.	G. Career dominance over marriage	1

³The attitude scale is reported in Matthews (1960, pp. 145-150). A copy of the scale can also be obtained from Esther Matthews, Newton South High School, Newton, Massachusetts.

II. The respondent's attitudes toward a woman's use of her intelligence as this attitude is supposed to be held by:		
8.	A. Other women	6
9.	B. Boys	4
10.	C. Men	7
III. The respondent's attitude toward acceptance of the following aspects of the feminine role:		
11.	A. Role of just wife and mother	10
12.	B. Desire for children	2
13.	C. Jobs which are of a feminine kind	2
14.	D. Differences between the sexes	2

The intercorrelations of the scores on the 14 scales which were finally used are low. Only a few of the correlations among scores on the scales exceed .40 (Matthews, 1960, p. 73).

Data from the 14 items not included in any of the 14 scales which were finally formed were not analyzed further. This decision was made in order both to maintain the original logic of the investigation and to eliminate, except in one instance, reliance upon data assessing attitudes on the basis of only a single question.

The questionnaire also sought statements of preference for both school subjects and careers. Two scores were obtained in each area: one for the most preferred subject or career; the other for the least preferred subject or career. In each case the score noted whether the preference was for a presumably masculine or feminine subject or career. The ideas of Roe (1956) and of Super (1957) were considered in the assignment of a masculine or a feminine designation. The concepts of field, level, degree of autonomy and the proportion of women employed according to the 1950 census were primarily used in distinguishing occupations in this way. Thus the study was conducted in relation to these four scores on preferred activities and the fourteen attitudes; eighteen scores in all.

Life Style and the Level of Education. College attendance is currently regarded as a key element in talent conservation (e.g., the National Defense Education Act of 1958) as well as in social inheritance (e.g., Shea, 1963). Accordingly, the type of course pursued in high school was singled out as one indication of life style. It seemed a likely consequent of the several attitudes or postures to-

⁴The young women were sometimes asked to express the attitudes of other people. Peers, parents, other women, boys and men were used as figures upon which the respondent's attitudes could be projected.

wards career and marriage in which we were interested.

Each respondent indicated the high school curriculum she: (1) had pursued in the past (adults); (2) was enrolled in at present (high school girls); or (3) planned to pursue in the future (junior high girls). Newton High School offers four different curricula for girls: two prepare for college, one for very selective and demanding colleges, the second for less demanding colleges; a third prepares for general employment; while the fourth is for students interested in a business or secretarial education.

A considerable majority of girls and young women elected either of the two college preparatory curricula (junior high, 86 per cent; senior high, 90 per cent; adults, 89 per cent). It is probable, therefore, that our data represent a situation in which career is more than usually likely.

Life Style and Life Plan. Plans for the patterning of career and marriage were taken as a second indication of life style. Super (1957) considers such career patterns to be fairly indicative of the life style.

Subjects stated their life plans for each of five periods: 2, 4, 6, 8 and 10 years hence. Every response was assigned to one of ten categories: (1)

student, (2) student and married, (3) married and no career, (4) married and feminine career, (5) married and masculine career, (6) married and employed, (7) worker only, (8) feminine career only, (9) masculine career only and (10) no entry. The same principles were used in designating a probable occupation as masculine or feminine as had been used in characterizing preferred and not preferred subjects and careers.

Although the life plans were originally catalogued for each of five two-year periods for every subject, the responses proved so consistent throughout each set that *only the life plan anticipated for the tenth year was considered in the analysis.*

Table I notes the distribution of subjects according to stage and both curriculum choice and plan for marriage and career during the next decade of life.

The table reveals that the majority of subjects at every stage hope to be married and not involved in a career ten years hence: (junior high, 60 per cent; senior high, 75 per cent; and adults, 71 per cent). The substantial increase from junior to senior high for the plan of marriage without career is accompanied by a complementary decrease of the desire for a feminine career only (from 13 per cent to 3 per cent).

Table 1
Curriculum Choice and Life Plan by Stage (in Per Cent)

Curriculum	Stage	Student and		Life Plan				Unmarried and Career:			No Plan Given	Sum*
		Unmarried	Married	No Career	Feminine	Masculine	Unspecified	Unspecified	Feminine	Masculine		
Not Given	Jr. Hi	—	—	3	0	—	—	1	0	—	0	4
	Sr. Hi	—	—	—	—	—	—	—	0	—	—	0
	Adult	—	—	—	—	—	—	—	—	—	0	0
College Preparatory (demanding)	Jr. Hi	4	—	36	5	0	2	3	5	1	1	57
	Sr. Hi	—	1	42	4	1	3	—	2	1	3	57
	Adult	—	1	35	10	1	2	0	1	1	2	53
College Preparatory (other)	Jr. Hi	1	—	15	3	—	0	1	7	—	0	27
	Sr. Hi	—	—	28	1	—	1	—	1	—	3	34
	Adult	—	0	26	6	0	—	0	0	0	2	34
General	Jr. Hi	—	—	1	—	—	—	0	0	—	—	1
	Sr. Hi	—	—	0	0	—	—	—	0	—	0	0
	Adult	—	—	1	—	—	—	—	—	—	—	1
Business	Jr. Hi	0	—	5	—	—	—	—	—	—	0	7
	Sr. Hi	—	—	5	0	—	0	1	1	—	2	7
	Adult	—	—	9	1	—	0	—	—	—	0	10
Sum*	Jr. Hi	5	—	60	8	0	0	—	0	0	0	96*
	Sr. Hi	—	1	75	5	1	2	6	13	1	1	98*
	Adult	—	1	71	17	1	2	0	3	1	4	98*

*The sums do not equal 100 because of chance in rounding the per cents.

Life Style and Attitudes toward Career and Marriage

Curriculum Choice and Attitudes. Attitudes toward career and marriage differ according to the curriculum choices of these young women (approximate Wilks' Lambda ratio [Rao, 1952, pp. 260-262] exceeds 1 per cent level of significance). Furthermore, this distinction is accomplished in terms of only a single significant discriminant function when three discriminants are possible. (Approximate test offered by Rao, 1952, pp. 370-375 was used.) The important weights of the significant discriminant are reported in the top of the left panel of Table 2 while the coordinates of the centroids associated with each of the curriculum choices are reported in the bottom panel of the table.

The curriculum groups seem discriminated pretty much on a dimension of acceptance of the "feminine lot" vs. acceptance of parental insistence upon the staging of dating and marriage. The college-going women accept the feminine lot rather extensively but have parents who are presumed to display a more relaxed attitude toward the time of dating and marriage than do the parents of those not aspiring to college.

Life Plan and Attitudes. Attitudes towards career and marriage also differ according to the life plans of young women (approximate Wilks' Lambda ratio exceeds the 1 per cent level of significance). Two of the possible 9 discriminant functions encompass the significant dispersion. The important weights of these discriminants

Table 2
Attitudes toward Career and Marriage and Life Style

Attitude		Curriculum	Curriculum and Life Plan*				Life Plan	
		D ₁ *	D ₁	D ₂	D ₃	D ₄	D ₁	D ₂
Women's Attitudes Re:	College, Career, Time of Marriage (Peer Focus)	—	—	—	—	—	—	—
	Time of Dating, Marriage (Parent Focus)	.83	-.46	.58	—	—	.45	—
	Children	—	—	—	-.73	-.41	—	-.54
	Homemaking	-1.00	—	-.84	.51	—	—	.60
	Inferiority to Men	—	—	-.47	-.54	—	.47	-.42
	Equality of Sexes	-.42	—	—	—	—	—	—
	Career Dominance over Marriage	—	—	—	—	—	—	—
Expression of Women's Intelligence as Reflected through:	Other Women's Attitudes	—	—	—	—	.60	—	—
	Boys' Attitudes	-.56	1.00	—	—	.63	-.93	—
	Men's Attitudes	—	—	—	—	—	—	—
Acceptance of Feminine Role	Role of Wife and Mother Only	-.43	-.42	-1.00	—	1.00	1.00	—
	Desire for Children	—	—	-.46	-.63	—	—	—
	Feminine Jobs	-.51	—	-.45	.55	—	—	—
	Sex Differences	—	—	—	—	—	—	—
Preferences for Feminine:	Subjects-Likes	—	—	—	—	.88	—	—
	Subjects-Dislikes	—	—	—	—	—	—	—
	Careers-Likes	—	.44	—	-1.00	1.00	-.50	-1.00
	Careers-Dislikes	—	—	—	—	.89	—	—
Curriculum Group		Centroids	Life Plan				Centroids	
No curriculum (stated or recalled)		-9.97	Student				2.12	-3.69
College preparatory (most demanding)		-14.15	Student and married				-.78	-2.34
College preparatory (less demanding)		-12.14	Married and no career				-.57	-3.49
General		-11.05	Married and feminine career				-.29	-3.57
Business		-10.70	Married and masculine career				-1.70	-2.12
			Married and employed				1.92	-2.43
			Worker only				1.99	-3.25
			Feminine career only				1.07	-4.14
			Masculine career only				2.86	2.43
			No entry				.76	-3.44

* Only standardized weights of .40 or more after conventionalization are noted in each discriminant vector (D).

** Centroids not reported because group size becomes small in this analysis.

are noted in the top right panel of Table 2 while the coordinates of the centroids are noted in the bottom of that panel in the table.

The life plans of these women are primarily differentiated on a continuum of attitude toward marriage as opposed to that toward career. Secondary distinctions occur on another continuum contrasting attitudes toward a feminine career with those toward homemaking.

Life Style and Attitudes. The dispersion of attitudes analyzed according to the combination of curriculum and life plan continues significant as was expected because of the significance found with each variable by itself. The discrimination is now more complex, however. Four discriminants are significant. The formerly important variables continue their contributions as can be seen by comparing weights in the four columns in the middle panel labeled "Curriculum and Plans" of Table 2, with those in the left and right panels of that table. Several new variables now enter the picture, however, because of the significance of the interaction of curriculum and life plan in the discrimination.

Development in the Relation of Life Style to Attitude

Development in Attitude. We have so far noted that attitudes toward career and marriage are related to life style as revealed in curriculum and life plan. What effect does development have on this relationship? This is the primary question of the study. Our investigation of the question first examines the effect of development only on attitudes toward career and marriage. Subsequently, we present the investigation of the effect of development on the relation between attitudes and life style.

The results of the analysis of attitudes in terms of developmental stage are reported in the left panel of Table 3. The analysis indicated that the dispersion of the 18 attitude scores is *not* identical in the three developmental periods. (Approximation to Wilks' Lambda ratio exceeds 1 per cent

level of significance.) Furthermore both of the two possible discriminant functions proved significant. The discriminant weights and centroids obtained in this analysis suggest that women move away from a belief in their inferiority to men as they mature. Furthermore, in this process the senior high group does not attribute as much denial of the right for such a move to peers and men as do the other two groups. These senior adolescents do worry about women's attitudes toward their denial of the cultural imperative of feminine inferiority and homemaking, however.

Development in the Dependence of Life Style upon Attitudes. Attitudes are related to life style. Furthermore, attitudes are related to development. We now consider the primary question. Does development influence the dependence of life style upon attitudes toward marriage and career? The answer to this question was sought by analyzing the dispersion of attitude scores in relation to: (1) curriculum and stage; (2) life plans and stage; and (3) curriculum, life plans and stage. The results of each of these analyses are recorded in the last three panels of Table 3. A comparison of the numbers and kinds of vectors appearing in these analyses with those appearing in the analyses of the three main effects reveals that development does interpose interactive effects within the dependence of life style upon attitudes toward career and marriage.

The dispersion of attitudes was significantly differentiated in each of the three analyses of main effects which are reported in Tables 2 and 3. In the last three panels of Table 3 where analyses of the combinations of classifications are reported, it can be noted that:

- (1) Three significant discriminants are needed to span the significant dispersion when curriculum is further distinguished according to stage while one sufficed for curriculum alone.
- (2) Three discriminants also span the significant discrimination in the case of plans with stage when two sufficed for plans alone.
- (3) Five discriminants are needed to span the significant dispersion when stage is added to

curriculum and plans when four sufficed for curriculum and plans in combination and one and two for each of those variables alone.

It is clear then that attitudes toward career and marriage do penetrate life style in different ways at different stages of development. This fact was further verified in a canonical correlation analysis (Tatsuoka & Tiedeman, 1954) of the more complete and mature data on life style which were available for just the adults in the sample (see Matthews, 1960). The analysis re-

vealed significant relationships between seven variables of life style and the attitudes toward career and marriage which were reported by these young women. Furthermore, despite the restricted range of age then under study, age appeared as a contingency factor in the second of the two sets of canonical vectors which were obtained. Distinguished by this pair of canonical vectors are younger women with a larger proportion of feminine-type jobs. The attitude vector accomplishing this dis-

Table 3

Effect of Development upon the Relationship between Life Style and Attitude toward Career and Marriage

Attitude		Stage		Curriculum and Stage			Plans and Stage			Curriculum, Plans and Stage				
		D ₁ *	D ₂	D ₁	D ₂	D ₃	D ₁	D ₂	D ₃	D ₁	D ₂	D ₃	D ₄	D ₅
Women's Attitudes Re:	College, Career, Time of Marriage (Peer Focus)	—	-1.00	—	.59	.63	—	—	—	—	.62	—	—	—
	Time of Dating, Marriage (Parent Focus)	.87	—	.93	.49	.40	.82	—	.72	.62	.41	—	.50	-1.00
	Children	—	—	—	—	—	—	—	.45	—	—	—	—	—
	Homemaking	.46	—	.64	.97	—	.45	—	—	.42	.52	—	—	—
	Inferiority to Men	-1.00	—	.75	-1.00	—	.92	—	—	.66	—	.59	.51	.44
	Equality of Sexes	—	—	—	.65	—	—	—	—	—	—	.54	.48	—
	Career Dominance over Marriage	—	—	—	—	—	—	—	.59	—	—	—	—	.45
Expression of Women's Intelligence as Reflected through:	Other Women's Attitudes	.45	.56	—	.48	.66	.43	—	—	—	—	.71	—	.53
	Boys' Attitudes	1.00	—	1.00	.52	-1.00	1.00	—	—	1.00	.74	.97	—	.51
	Men's Attitudes	—	.59	—	—	—	—	—	.56	—	—	—	.54	—
Acceptance of Feminine Role	Role of Wife and Mother Only	—	—	—	.86	—	—	.81	.85	—	.77	-1.00	-1.00	—
	Desire for Children	—	—	—	—	—	—	—	—	—	—	—	—	.57
	Feminine Jobs	—	—	.45	.40	—	—	—	—	—	.55	—	—	.42
	Sex Differences	—	—	—	—	—	—	—	—	—	—	—	—	—
Preferences for Feminine:	Subjects-Likes	—	—	—	—	—	—	—	.92	—	—	—	—	.74
	Subjects-Dislikes	—	—	—	—	—	—	—	—	—	—	—	—	—
	Careers-Likes	.55	—	.46	—	—	.40	-1.00	1.00	—	-1.00	.73	.50	.47
	Careers-Dislikes	—	—	—	.52	—	—	—	.62	—	—	—	—	—
Stage		Centroids		Centroids not reported because of small groups.										
Junior High (early adolescence)		-3.48	2.27											
Senior High (adolescence)		-2.31	3.40											
Young Adult		-1.05	2.38											

* Only standardized weights of .40 or more are noted in each discriminant vector (D).

tion is largely characterized by subject and career preferences of a feminine kind taken in opposition with attitudes toward a desire for children and toward the presumably negative reaction of men to the expression of intelligence by women.

The Effect of Attitude on Life Style: Some Hunches

What seems to be at play in the development of this definitely identifiable relationship between life style and attitude toward career and marriage? Unfortunately, the design of the study does not directly illumine this important question. Therefore, in considering the question, we shall only speculate upon some of the themes that occur and re-occur in the relationship as revealed in the several analyses reported in Tables 2 and 3 when these results are viewed in their entirety. The themes are singled out for theoretical as well as empirical reasons.

A woman's perception of the male attitude toward her use of her intelligence is important in the discriminating dispersion either by itself or in opposition to the view imputed to women in every one of the seven discriminant analyses. Furthermore, some aspect of this distinction always appeared within the most discriminating vectors.

It appears that many girls and women structure their lives on the premise that males view the female's use of her intelligence with distaste and that it is therefore wise to accept this situation if one wishes to marry. Women accepting this premise probably believe that a career (particularly one in competition with men) is very unwise. This attitude would be an important deterrent to the realization of self through employment. It is worthy of further consideration and study.

A second major theme in the effect of attitude upon life style occurs through the attitudes toward both homemaking and the presumably dominant position of men. Both variables appear either in opposition or

alone in every one of the significant discriminant vectors. Although they do not figure quite as frequently in the first discriminant as does the first theme, there is little doubt that these counteracting forces are of importance. Perhaps they are a corollary of the first theme: i.e., when women perceive that males take a dim view of the expression of women's intelligence they feel inferior to men intellectually and adopt (perhaps defensively) a realm of their own, homemaking.

The third major theme of attitude in life style is the conflict between acceptance of the role of wife and mother and acceptance of a feminine career. The attitude toward feminine jobs is also sometimes linked with the latter attitude. Although this theme occurs somewhat less frequently than the first two themes noted, it is always to be found in either the first or second discriminants. It illustrates the fact that there are probably at least two distinct feminine orientations: the homemaking and the career (feminine). Women who devalue the use of their intelligence from childhood tend to feel intellectually inferior to men, accept homemaking as their realm, and reject the possibility of a career (even in conjunction with marriage).

The fourth theme is found still less often than its predecessors. Women's attitudes toward time of dating and marriage (parent focus) is in opposition to women's attitudes toward the purpose of college, time of dating and of marriage (peer focus) particularly in the second and other discriminants of lesser importance. We suspect that, in younger girls, this is a reflection of adolescent resentment toward parental ideas of dating and marriage and the peer-group pressure toward ever earlier dating and marriage. Although this fourth theme may not seem, at first, to relate closely to the previous themes, it actually is a part of a unified picture. Parents usually state a wish for girls to be able to earn a living, and yet they are fully as concerned that their daughters be marriageable. This leads many

parents to caution their daughters not to be overly competent in their careers and to seek a "suitable" marriage partner. Yet, as girls marry earlier and earlier society expresses grave concern over the lack of trained women in the professions.

It is therefore possible that girls and women attribute the limitations upon their lives as forces placed in operation by the customs of society. If women feel that they are powerless to redefine their role, we will continue to lose the dual-life contribution that many women are capable of making.

A fifth and more tenuous theme is the occasional indication of simultaneous acceptance and rejection of the presumably general feminine role. The ambiguity in role perception may represent either confusion about the feminine role or acceptance of the duality of a woman's lot without blame for the condition. It is critical to know which condition exists because there is blame and unhappiness in the first and acceptance and comfort in the second.

Generalization

What have we learned then?

Our results indicate that the life style of the young woman is definitely related to her attitudes towards career and marriage. Also, the relationship is modified developmentally. Furthermore, our use of specific attitudinal variables has somewhat clarified this dependency.

A formerly untested attitudinal scale proved most helpful in this investigation. Tests of the instrument proved our subjects capable at all stages of breaking their response set and of giving a converse but consistent response as necessary. Eighteen attitudinal scales at all three stages proved logically pleasing, somewhat homogeneous in the responses in each set of items and reasonably uncorrelated. Only ten of these scales bore the brunt of accounting for the dispersion in life styles of our subjects in later analyses, however. The eight scales which figured in the dispersion analyses less importantly were the frequently over-

played attitudes toward: (1) children; (2) sexes which are distinguished but equal; (3) domination of marriage by careers; and (4) school subjects.

Our cross-sectional array of subjects is intended to portray, in the space spanning the attitudinal scales, the trace which the centroids of a group would make as its constituents age. This is a shaky assumption as has been noted earlier. Furthermore, our results appear in data where only the gross-est of tests can be applied. Nevertheless, we have uncovered signs of interest.

An interesting finding in the development of attitudes and life style is the drop in career commitment from junior to senior high school (from 13 to 3 per cent). This observed change in relative frequency of career commitment was further bolstered by the study of attitudes in direct relation with stage. Subjects in the three stages of development considered differed in their attitudes toward career and marriage. However, the high school group differed from the junior high group specifically in a greater acceptance of marriage and in their beliefs that men and their peers do not deny them a position of equality but that women are concerned about their possible denial of the cultural imperative of feminine inferiority and of homemaking for the woman. The imminent possibility of marriage seems to have an effect on the relationship of life style and attitudes toward career and marriage which is not noticeable in the other two stages examined, an earlier one and a stage in which marriages occur.

Finally, attitudes toward marriage and career definitely varied according to the life plans which women express. The nature of the life plan contributes one dimension of the characterization of the marriage-directed or career-directed attitudes. Although attitudes and life plans are intimately related, the relationship is best understood within the perspective of developmental stage.

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A Comparison of Student and Professional Prestige Ranking of Jobs in Psychology¹

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Granger (1959) demonstrated that psychologists perceive a prestige hierarchy of occupations in their own field. This study was an attempt to determine if the perception of the hierarchy was unique to psychologists. Granger's original questionnaire (consisting of 20 psychological occupations to be ranked according to prestige) was given to a sample of University students, who were grouped as "naïve ($N = 111$)" or "advanced ($N = 73$)" in terms of psychological training and identification with the field. The rankings of "naïve" and "advanced" students were compared to those of Granger's APA random sample; the three hierarchies were sufficiently similar to indicate that the perception of the hierarchy is not determined by training, experience or ego involvement with psychology.

Granger (1959) asked a group of subjects selected from the APA directory to rank 20 job titles within the field of psychology according to occupational prestige. He demonstrated rather clearly that psychologists do perceive an occupational prestige hierarchy within their own job family.

Granger's review of other studies showed that subjects rank other occupations on the basis of prestige in stable hierarchies. These hierarchies were shown to be "resistant to change through decades of time and in spite of wide variation in educational, socio-economic, and cultural characteristics of subjects performing the prestige discriminations" (Granger, 1959, p. 183). This generalization was based on the results of studies where the list of job titles was extremely diverse, involving a wide variety of job families. The possibility was considered in this study that the same may be true of hierarchies, such as found by Granger, where the list of titles is restricted to a single job family, e.g., psychology. In other words, this prestige hier-

archy within psychology may remain stable and intact regardless of who does the ranking; or it may be peculiar to the perceptions of psychologists as a result of their training, associations with other psychologists, and ego involvement.

The present study, then, was designed to answer the question: Is the prestige hierarchy found by Granger unique to psychologists, or will the same hierarchy result regardless of the degree of training and ego involvement of those doing the ranking?

Method

Granger's original questionnaire was submitted to 270 students enrolled in psychology courses at Missouri University. The questionnaire consisted of 20 psychological occupations to be ranked in order of prestige. Each occupation was followed by a short descriptive phrase including minimum educational requirements, e.g., Ph.D., M.A., B.A. (for further information on construction of the questionnaire see Granger's 1959 article).

In order to compare the rankings of groups representing different levels of

¹This study was conducted as a project in Professional Problems in Psychology under Robert S. Daniel.

training and ego involvement, the subjects of the present study were placed into two subgroups with regard to their relationship to psychology—"naive" students and "advanced" students. The rankings of both these subgroups would then be compared with those of Granger's APA random sample. If the prestige hierarchy within psychology is a function of learned perceptions during training and experience as a psychologist, then the rankings of "naive" students would be expected to differ considerably from those of the APA group, with those of "advanced" students showing a much closer resemblance.

Only 184 of the 270 completed questionnaires were included in the analysis. Since a "naive-advanced" dichotomy was desired, questionnaires which did not fit the dichotomy were excluded. The "naive" group consisted of 111 students from all departments who were taking their first course in psychology. Ninety-two per cent of this group were not psychology majors, and

therefore could be assumed to experience no ego involvement in the field. The 73 "advanced" subjects consisted of graduate students in various areas of psychology in addition to undergraduate psychology majors with at least 18 semester hours credit in psychology. Among the 36 undergraduates in the "advanced" group, the mean number of hours credit in psychology was 24.

Results and Discussion

Median ranks and quartile deviations for the 20 job titles are given in Table 1 for Granger's APA random sample, and the "naive" and "advanced" students of the present study. Even though certain scattered differences can be seen in the actual ordering of the three hierarchies, there seems, to be sure, a high degree of agreement among the three groups represented in the table. As a striking illustration of this agreement, the Spearman rank order coefficients between median rankings were

Table 1
The Prestige Hierarchies of 20 Psychological Occupations Based on the
Rankings of Three Sample Groups

Occupation	APA Random* (N = 300)		Advanced Student (N = 73)		Naive Student (N = 111)	
	Median ranks	Q	Median ranks	Q	Median ranks	Q
Psychology Prof. (large Univer.)	1.3	.71	2.2	1.65	3.5	2.53
Experimental Psychologist (general)	4.3	2.57	6.0	3.32	4.4	3.37
Clinical Psychologist (institutional)	4.7	2.34	3.3	2.24	4.3	2.45
Social Psychologist	5.6	2.64	7.2	2.95	6.7	4.39
Consulting Psychologist (industrial)	6.0	2.64	7.6	3.0	6.9	3.39
Research Psychologist (human engr.)	7.0	2.58	8.5	3.85	7.8	4.46
Research Psychologist (test constr.)	7.5	2.37	8.6	3.00	8.2	4.50
Counseling Psychologist	7.7	2.32	4.9	2.25	6.5	2.75
Psychologist (survey research)	8.2	2.50	8.7	2.88	7.1	3.33
Psychology Prof. (small arts coll.)	9.8	2.55	10.1	2.99	6.5	3.55
Clinical Psychologist (private prac.)	10.1	3.97	10.3	5.0	7.1	3.26
Child Psychologist	11.5	2.73	10.7	3.70	11.6	2.65
Psychology Prof. (teachers coll.)	11.5	2.21	11.3	1.79	10.0	3.12
School Psychologist	14.1	1.96	14.6	1.72	9.9	2.84
Psychologist (educ. skills clinic)	14.7	1.80	14.3	2.00	12.1	1.86
Personnel Psychologist	14.9	1.91	15.4	2.33	15.6	1.86
Rehabilitation Counselor	16.0	1.39	17.6	1.40	13.4	3.25
High School Counselor	18.4	.86	18.77	.92	12.4	3.09
Psychometrist	18.5	.91	19.5	1.2	14.7	4.48
Employment Interviewer	19.5	.67			18.4	2.45
					18.0	3.33
					17.7	

*Granger (1959, p. 185)

.98, .97 and .98 when the three groups were intercorrelated. The differences in median ranks were negligible to say the least. In terms of within-group variability, however, there appears to be a trend worth noting. The mean Q for the groups is: 2.08 for the APA sample, 2.55 for the "advanced" students, and 3.25 for the "naive" students. This seems to suggest a diminishing variability in perception of the hierarchy as psychological sophistication increases. Further support of this assumption may be drawn from the fact that neither of the experimental groups produced a median rank of one.

There was only one title whose position was changed more than two ranks, counseling psychologist. The advanced group upgraded them five ranks and the naive group four ranks. Twenty-one subjects in the advanced group denoted counseling as their major, there was only one naive subject who stated his major as counseling. This notable change in position could be a function of the University having a well-developed counseling service that is accepted by the student body. Also, counseling probably represents a more glamorous profession than academic-scientific and research-oriented titles.

It is felt by the authors, and pointed out by Granger, that the hierarchies seem to be influenced by the minimum educational requirement assigned the titles in the questionnaire. In all three groups the first nine positions were assigned to the "Ph.D. titles," the next eight to "M. A. titles," and the last three to "B. A. titles." Perhaps if the

educational requirement had been deleted, the results would have reflected a different hierarchy. However, in Granger's study APA fellows and associates from the Division of School Psychologists disregarded the minimum educational requirement bias consistently enough to be reflected in group statistics.

Conclusions

It may be appropriate at this point to acknowledge the authors' awareness of the small numbers and restricted representativeness of the subjects polled. But even in the face of this apparent limitation, the data presented seems sufficient to warrant the conclusions that: (1) The occupational prestige hierarchy found by Granger within the field of psychology is not unique to the perceptions of psychologists. (2) Perception of the hierarchy does not seem to be related to training, experience or ego involvement in the field of psychology. (3) At the same time, however, psychologists become more homogeneous in their perception of the hierarchy than groups less involved and sophisticated in psychology. It is tempting to speculate that rankings made by the general population would show essentially the same hierarchy, but the present findings could in no way be extended to support such a statement.

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The Effectiveness of Two Study Habits Inventories in Predicting Consistent Over-, Under- and Normal Achievement in College

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Three matched groups of forty-two consistent over-, under- and normal-achieving male college students were administered the Brown-Holtzman Survey of Study Habits and Attitudes and Borow's College Inventory of Academic Adjustment to compare the effectiveness of these instruments in identifying non-intellectual factors which discriminate among consistent over-, under- and normal-achievers, and which may significantly influence academic achievement. Both instruments show evidence of being most useful in identifying non-intellectual factors which may influence academic achievement and in discriminating among over-, under- and normal-achieving students. It is also possible that the neglect of the consistency factor in identifying academic deviates may be responsible for the failure of similar instruments in certain previously reported studies to discriminate significantly among various achievement groups.

It seems evident to most educators that a student's academic grades are a result of many factors such as study habits, interest and motivation, which are not represented in the ordinary intelligence or aptitude test used to predict scholastic success. Awareness of the influence of such non-intellectual factors is not in itself adequate for aiding students in the area of academic adjustment. We must also determine whether we can readily identify these influences so that we can gain greater understanding of students in academic difficulty and help them more fully realize their best potentialities.

This investigation was concerned with a comparison of the Brown-Holtzman Survey of Study Habits and Attitudes (1953) and Borow's College Inventory of Academic Adjustment (1949) in the identification of those non-intellectual factors which discriminate among and characterize consistent over-, under- and normal-achievers, and which may significantly influence academic achievement. A subordinate problem

was to determine whether the restriction of samples to subjects who are consistent in their over-, under- and normal-achievement increases the ability of such standardized instruments to discriminate among the achievement groups.

In previous studies utilizing the Survey of Study Habits and Attitudes, Ahmann and Smith (1958) found no significant correlation with first semester grade point average. Anderson (1957) found that random samples of college probationees and non-probationees did not differ significantly in terms of scores on the Survey of Study Habits and Attitudes. Lum (1960), in a contradictory study, found that the SSHA discriminated over-achievers from under- and normal-achievers, and Brown and Holtzman (1953) found that the SSHA correlated .63 for women and .73 for men with earned grade point averages. Studies by Borow (1946, 1947), Centi (1959), Popham and Moore (1960) and Burgess (1956) concluded that the College Inventory of Academic Adjustment could be of value in

identifying potential over- and under-achieving students.

A review of the previous research work on over- and under-achieving students suggests that neglect of the *consistency* factor may have been responsible for some of the non-significant findings obtained among academic deviates on such measuring instruments as study habits, interests and adjustment inventories.

Most research workers have tested students during their second term in college and have attempted to identify over- and under-achievers by comparing their first-term grades only with their first-term predicted averages. This process fails to take into account the probability that some under-achieving students may have been through a trying period of college adjustment and orientation lasting from several weeks to several months. The period of adjustment in all probability does have a negative effect upon the academic achievement of the individual, but he is also during this period attempting to find the answers to his problems. By a trial and error process, or through the advice of his more experienced peers, faculty or counselors, some of his poor habits are overcome. The results of these newly acquired habits or traits, however, do not always become evident in his first-term academic grade point average.

If, however, one examines the grade point average of this student after a second term has been completed, and compares it to his predicted average, one may find that he can no longer be considered an under-achiever. Yet this is usually the term in which he is asked to complete personal inventories. The reverse process may happen with an over-achiever who applies himself conscientiously for the major portion of the first term but for various reasons does not apply himself the second term.

If we are to attempt to differentiate among over-, and under- and normal-achievers, it seems imperative that we identify those who are most likely to continue to be over-, under- and normal-

achievers when the inventories are being administered. Students who consistently under-achieve, over-achieve, or achieve at predicted levels for one full academic year, will more probably continue to do so than will students who have over-achieved, under-achieved, or achieved at their predicted level for one or two terms only. Also, it would seem apparent that the grade point average would be more reliable for those students who consistently achieve similar or parallel grades over a three-term period rather than over a one- or two-term period.

Procedure of the Investigation

From a total of 1,061 freshman male students enrolled in science curriculums at The Pennsylvania State University, it was possible to match three samples of 42 consistent over-, and under- and normal-achievers with a high degree of accuracy on the following variables: age, sex, race, term in college, courses taken, residence for first three terms (university housing only), predicted grade point average, minimum deviation from predicted average of at least one probable error of estimate .613 (over- and under-achievers), consistency of over-, under- and normal-achievement (maximum deviation of cumulative average from predicted average of .2 of a grade point) over a three-term period. Table 1 presents the mean obtained grade point average, the mean predicted grade point average and the mean deviation from the predicted grade point average of the over-, under- and normal-achiever groups.

The *Survey of Study Habits and Attitudes* and the *College Inventory of Academic Adjustment* were completed by the samples several days prior to their first term as sophomore students. Both instruments are of the self-administering, no-time-limit type. To identify non-intellectual factors which could influence academic achievement and to determine the discriminating power of the SSHA and CIAA, "t" tests for difference between means of correlated samples of equal size were utilized as the statistical technique.

Table 1

The Comparison of Mean Cumulative Grade Point Average, Predicted Grade Point Average, Standard Deviation, and Mean Deviation from Predicted Grade Point Average for Consistent Over-, Under- and Normal-Achievers

	Over-achievers (N-42)	Under-achievers (N-42)	Normal-achievers (N-42)
Mean Predicted Average	2.505	2.540	2.521
Standard Deviation of Predicted Average	.271	.274	.310
Mean Cumulative Average	3.311	1.705	2.557
Standard Deviation of Cumulative Average	.258	.203	.341
Mean Deviation from Predicted Average	.806	.835	.036

The SSHA was constructed by selecting certain items reflecting study methods, motivation for study and certain attitudes toward scholastic activities believed to be important in the classroom which correlated positively with grades and not with the American Council on Education Psychological Examination. The split-third reliability coefficient of the SSHA for men was found to be .92.

The CIAA was especially suited to this study since the individual items which comprise the inventory were originally selected on the basis of their power to differentiate between groups of "over-achievers" and "under-achievers." This instrument was also developed and standardized at The Pennsylvania State University, where the present study was also conducted. Moreover, this inventory, like the Survey of Study Habits and Attitudes, shows almost no correlation with tests of scholastic aptitude, and reports a corrected split-half reliability coefficient of .92 for men.

Since both the CIAA and the SSHA are designed to identify factors affecting academic achievement other than intelligence, they lend themselves well for comparison to determine which instrument better discriminates among consistent over-, under- and normal-achievers. It was felt that if both instruments discriminated significantly

among achievement groups, implications for further research would become evident since item analysis might reveal common academic adjustment areas which characterize and discriminate among consistent over-, under- and normal-achievers.

Findings of the Survey of Study Habits and Attitudes

It should be noted in Table 2 that the Survey of Study Habits and Attitudes discriminates significantly only between over-achievers and the remaining achievement groups. It does not discriminate between under- and normal-achievers. This finding suggests that the difference between over-achievers and students of comparable intelligence may be mainly one of certain personality characteristics such as attitude, set and motivation toward scholastic activities, rather than professional study habits. These findings also lend support to the validity of the SSHA as an instrument which measures scholastic attitude, as well as study habits, which are significantly related to academic success.

Table 2 reveals "t" values significant beyond the .01 level obtained between over- and under-achievers and between over- and normal-achievers in the total raw score area. No significant differences were found between normal- and under-achievers.

Table 2

Means and "t" Comparisons on the Survey of Study Habits and Attitudes Inventory for Consistent Over-, Under- and Normal-Achievers

Areas	Over-achievers (N-42)		Under-achievers (N-42)		Normal-achievers (N-42)		Groups Compared "t"	
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
Raw Score	45.45	10.57	36.14	14.40	38.33	11.07	.781 3.337 3.717	U-N N-O** O-U**
Counseling Key Score	2.95	3.00	5.10	3.72	4.41	3.85	.895 2.342 3.073	U-N N-O* O-U**

O —over-achievers
 U —under-achievers
 N —normal-achievers
 * —significant beyond .05 level
 ** —significant beyond .01 level

Table 3

Means and "t" Comparisons on Sub-scores and Total Scores on College Inventory of Academic Adjustment for Consistent Over-, Under- and Normal-Achievers

Sub-score Areas	Over-achievers (N-42)		Under-achievers (N-42)		Normal-achievers (N-42)		Groups Compared "t"	
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
Curricular Adjustment	18.69	4.21	15.67	4.12	16.69	4.75	.986 2.083 2.975	U-N N-O* O-U**
Maturity of Goals & Level of Aspiration	23.02	4.21	19.43	4.99	21.62	4.49	2.089 1.717 3.457	U-N* N-O O-U**
Personal Efficiency	25.31	5.41	19.83	5.05	23.55	5.18	3.253 1.485 4.669	U-N** N-O O-U*
Study Skills & Practices	27.69	7.49	23.64	7.51	26.88	8.06	1.658 .500 2.479	U-N N-O O-U*
Mental Health	20.41	6.82	19.88	4.50	21.41	4.85	1.447 .763 .384	U-N N-O O-U
Personal Relations (with Faculty & Associates)	18.02	4.02	17.62	3.20	16.76	3.73	1.229 1.445 .484	U-N N-O O-U
Total Score	132.76	24.18	115.88	20.88	126.91	22.31	2.200 1.220 3.245	U-N* N-O O-U**

O —over-achievers
 U —under-achievers
 N —normal-achievers
 * —significant beyond .05 level
 ** —significant beyond .01 level

When compared with published percentile norms, the under-achievers as a group fell at approximately the 45th percentile while normal- and over-achievers fell close to the 57th and 73rd percentiles, respectively.

On the Special Counseling Key of the SSHA, "*t*" values significant beyond the .05 level, and the .01 level, were obtained between over- and normal-achievers, and over- and under-achievers, respectively, revealing a greater degree of academic adjustment by the over-achievers. No significant differences were found between normal- and under-achievers.

Findings on the College Inventory of Academic Adjustment

Table 3 presents the means and "*t*" comparisons on sub-scores and total-scores on the College Inventory of Academic Adjustment for consistent over-, under- and normal-achievers. This instrument differs from the SSHA in that it serves as a diagnostic tool in identifying more specific areas of possible academic maladjustment. It was found that nine of twenty-one possible comparisons among over-, under- and normal-achievers revealed significant differences. It is interesting to note that the significant differences obtained on the CIAA do not pertain only to the over-achievers but are distributed for both the over- and under-achievers. These findings reveal that there are specific areas of academic adjustment which may be significantly related to academic achievement.

Over-achievers differed significantly from normal-achievers only in the area of Curricular Adjustment as revealed by a "*t*" value significant beyond the .05 level, indicating greater adjustment in this area for over-achievers.

Over-achievers differed significantly from under-achievers at the .01 level and beyond in the areas of Curricular Adjustment, Maturity of Goals and Level of Aspiration, Personal Efficiency: Planning and Use of Time, and Total Score. In the area of Study Habits and Practices a significant difference between the two extreme groups

was found at the .05 level. It should be noted here that study habits, while important, do not account for the greatest differences between over- and under-achievers: motivation and other scholastic attitudes appear even more strongly related to academic success as revealed by the "*t*" values obtained.

Under-achievers differed significantly from normal-achievers at the .05 level in the areas of Maturity of Goals and Level of Aspiration, and Total Score. A .01 level of significance was obtained between under- and normal-achievers in the area of Personal Efficiency: Planning and Use of Time.

The "*t*" values obtained indicated that both over- and normal-achievers were in general better adjusted academically than under-achievers. When compared with the published percentile norms, the under-achievers as a group fell at the 42nd percentile, while the normal- and over-achievers fell at the 57th and 61th percentiles, respectively.

No significant differences among over-, under- and normal-achievers were found in the Mental Health or Personal Relations With Faculty and Associates categories.

Conclusions

Both instruments reveal that the difference between academically successful and failing students of comparable intelligence may be mainly one of certain personality characteristics such as attitude, set and motivation toward scholastic activities and should not be attributed to study skills alone.

The neglect of the consistency factor in identifying over-, under- and normal-achievers may be responsible for the failure of instruments in certain previously reported studies to discriminate significantly among various achievement groups. Based on the samples of consistent achievers used in this study, findings seem to indicate that both the *Survey of Study Habits and Attitudes* and the *College Inventory of Academic Adjustment* can help to identify certain

personal attributes, apart from scholastic aptitude, which may be significantly related to the academic performance of college students. Both instruments show evidence of being most useful in helping to discriminate among over-, under- and normal-achieving students.

Since collegiate experience is necessary to answer items accurately on the *College Inventory of Academic Adjustment* and the *Survey of Study Habits and Attitudes*, they are not adapted for use in predicting the scholarship of applicants for admission to college. These instruments do, however, show considerable promise as prediction aids after the student has gained some collegiate experience. Counselors may find that the SSHA, when used in conjunction with the CIAA, can help faculty and counselors identify those areas of academic maladjustment from which a student's under-achievement may originate. These instruments may assist in different ways in understanding the reasons for academic success or difficulty, since the SSHA claims to measure the motivation and attitude of students toward study and scholastic activities while the CIAA serves as a diagnostic tool in identifying more specific areas of possible academic maladjustment.

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Comment

Following the success of army psychologists with intelligence testing in World War I, hopes ran high that cognitive-type measures would provide an answer to the problem of predicting academic performance. During the 1920's and early 1930's, the failure of most intelligence and scholastic aptitude tests to account for more than about 25 per cent of criterion variance among students was attributed by most researchers either to a lack of refinement in the prediction measures or to the unreliability of course grades. Before World War II, attention had already begun to shift to the role of work habits, motives,

emotional dispositions, and other non-intellectual variables in scholastic achievement. Numerous studies demonstrated that such variables were related to grade performance and some attested to the practicability of combining aptitude and non-intellectual measures in a multiple regression technique. Yet, despite some gains, more recent efforts to raise the predictive validity of personality-type instruments have not been impressive.

De Sena's approach to the general problem is to call into question the reliability of overachievement and underachievement indexes which are based on a single school

term. De Sena reasons that adverse conditions which are transient and situational may cause a student to perform as an underachiever during his first term in college but he may no longer be correctly classifiable as such at the time he completes his personality inventory later in the school year. Such a misclassification, De Sena contends, spuriously reduces the empirical validity of the inventory.

It is a bit curious that more workers have not given serious attention to the problem of misclassifying over- and under-achievers in research. Farquhar and Payne at Michigan State have recently reviewed the selection methodologies by which over- and under-achievers are identified and some writers have pointed out that the classification of subjects is a function of the specific operational definition employed. De Sena's particular contribution lies in his calling attention to the time dimension and to the need to distinguish between stable and unstable patterns of academic achievement over time. Still, De Sena's paper is not actually designed to test the thesis that non-intellectual inventories of the sort he uses yield higher validities with more extended time samples. His results provide considerable evidence that the SSHA and the CIAA discriminate significantly between consistent over- and under-achievement among freshman students. But inspection of the test manuals and the journal literature shows that these two instruments provide comparable validity findings with samples of short-term over- and under-achievers. Thus, De Sena's study does not furnish decisive evidence

with respect to the impact of the consistency-of-achievement factor upon the empirical validity of non-intellectual measures.

Like other writers, De Sena is prone to speak of non-intellectual factors which "influence" scholastic achievement and he refers to his measures as "prediction" aids. Yet, as he clearly recognizes, such self-report instruments as the SSHA and the CIAA, if they are to yield meaningful scores, must ordinarily assume some prior experience with college on the part of the respondent. Perhaps such instruments are better referred to as *postdiction* rather than prediction measures. To what extent are subjects' responses a reflection of their self-estimates as students, based on knowledge of past school achievement, rather than indicators of durable stylistic and motivational attributes which are already laid down before entrance to college? Research does not yet tell us the answer to this vexatious question. It may turn out that self-report inventories of the type De Sena employed will prove more serviceable as diagnostic instruments in counseling when such questions as "What went wrong?" and "What can I do about it?" are relevant. But, in the long run, improvement in the actual prediction of scholastic performance may rest more with newer objective and projective measures of personality which tap significant motivational traits available to the counselor at the outset of the student's college career.

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Research Frontier

The Center for Interest Measurement Research

David P. Campbell

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In 1963, the University of Minnesota formally established the Center for Interest Measurement Research within the Student Counseling Bureau under the administration of the Office of the Dean of Students. An advisory board, composed of individuals familiar with the problems of interest measurement, was also created. The goals of the Center are: (1) to maintain an active research program in interest measurement; (2) to serve as a focal point for information on related research conducted in other places; and (3) to serve as a repository for basic data on interest measurement.

This is a report on how the Center came to be established, on some of its current activities, and on some speculations about the future of interest measurement.

The University of Minnesota has been an active locus for research on human interests for over thirty years. Vocational interests have been a major topic of research at this institution for individuals such as Donald Paterson, John Darley, Theda Hagenah, Ralph Berdie, Wilbur Layton and Kenneth E. Clark. Other staff members and dozens of graduate students have also conducted research in this area. A recent inventory of publications indicated that 6 books or monographs, 46 technical publications and 60 Ph.D. dissertations at Minnesota have been directly concerned with interest measurement.

The need for a formal center was spurred by the donation to the University of the late Professor E. K. Strong's collection of basic data, manuscripts and other materials related to the development of the Strong Vocational Interest Blank (SVIB).

With the receipt of these materials went the implicit recognition that Minnesota would serve as the clearing house for matters related to the SVIB. While Professor Strong was active, he had provided an administrative locus for work on the instrument in a manner that insures his recognition as the "father of interest measurement." In his later years, he and others closely connected with the Strong Blank began planning some procedure to insure continuity, both of research and administration, of the SVIB.

Such continuity is now especially required since the SVIB is undergoing major revision. The revision was launched around 1956 when Strong, K. E. Clark and R. F. Berdie began to think seriously about updating the Blank. In 1958, work began with the transfer of the criterion data to Minnesota where Clark and Berdie undertook the organization of these materials for computer input. In 1960, when the present writer became involved, work was just beginning on several experimental methods of scoring. Most of the experimental work on revision has since been completed and reported (Strong, 1962, 1963, Strong, *et al.*, 1964) and we are now putting the results into effect.

Many questions arose during work on the revision and there was a clear need for some concentration of decision-making power. While it seemed desirable, perhaps essential, for most of the reins to be held chiefly by one person, there was general agreement that no single person should be given unlimited freedom. Thus the Center was established with a director responsible to an advisory board of individuals with a diversity of outlooks. The writer was

appointed as Director. The current advisory board includes Ralph Berdie, University of Minnesota, Chairman; John Black, Stanford University; David Campbell, Secretary; Kenneth Clark, University of Rochester; John Darley, University of Minnesota; Thomas Harrell, Stanford University; John Holland, American College Testing Program; Anne Roe, Harvard University; Leona Tyler, University of Oregon; and E. G. Williamson, University of Minnesota.

Much of the foregoing discussion applies also to the Minnesota Vocational Interest Inventory (MVII), an interest inventory developed by K. E. Clark for use at the skilled trade level (Clark, 1961). Clark has given his standardization data and the administration of the MVII over to Minnesota, and the Center for Interest Measurement Research is currently preparing this Inventory for general publication.

Current Activities

Revision of the SVIB and MVII

The largest and most important current projects are the revisions of both the SVIB and the MVII. It is tentatively planned that both will be available for general use early in 1965.

Other projects at the Center include a study of the stability of interests within a single occupation over a span of 30 years, an attempt to collect SVIBs from famous people for historical preservation, and a study of the interests of political liberals versus political conservatives. Each of these is discussed more fully below.

The Stability of Banking Interests

The Strong materials given to the University of Minnesota include the criterion groups for most of the SVIB scales. In the criterion group of bankers we found that 180 of the original 250 bankers, whose data were collected in 1934-35, were employed in banks in the Ninth Federal Reserve District which centers around Minneapolis. Using these Minnesota bankers we have been able to conduct a unique study of interest stability.

The question under study was "How much change occurs in the vocational in-

terests of a single occupational group over time?" To answer this, we approached the bankers who today hold the identical jobs that the original group held 30 years ago, and asked them to fill in the SVIB. Thus, if one of the original group was the President of the First State Bank in Duluth, Minnesota in 1934, we asked the current president of that bank to complete the SVIB. This sampling technique held the job constant over 30 years.

One hundred and three SVIBs were collected from individuals whose banking jobs corresponded to those held 30 years earlier by subjects in the original SVIB banking group. Forty-eight men from the original group were available for retest today. This testing provided a second comparison over the thirty-year period with the individual held constant. The results of this latter comparison showed the type of stability that we have come to expect in interest measurement. The average profile of the group today was virtually identical with their corresponding profile of 30 years ago. The average score on the Banker scale then was 50.6; it is now 50.3. However, the median scale test-retest reliability coefficient was .57, a figure considerably lower than the .75 reported by Strong over an interval of 22 years.

The results of the other comparison—holding the job constant over 30 years—also showed substantial consistency but there were some changes. The "new bankers" profile closely resembled the shape of the "old bankers" but the new ones were two or three standard scores higher on all scales except Banker and the Group IX Sales scales. On the latter scales, the "old bankers" scored a few points higher. The biggest differences were found on the Physician, Psychologist, Industrial Arts Teacher, Vocational Agriculture Teacher and Senior C.P.A. scales with the new group scoring about ten points higher.

These changes can be partially explained by the increasing level of education and professionalization in the banking profession. However, some of the technical, non-professional scales, such as the two teacher

scales mentioned above, and the Farmer and Aviator scales also showed differences in favor of the "new bankers." These differences may indicate that the SVIB is slightly less effective in differentiating bankers from other occupational groups than it was 30 years ago. New bankers did not score quite as high on the Banker scale as the old bankers, (46.2 and 51.6, respectively) and their average score on the other 44 occupational scales was slightly higher than the old bankers (27.3 to 23.6). This finding was far overshadowed by the substantial stability within this occupation and the clear demonstration that the scale is still valid—the new bankers scored higher on the Banker scale than any other scale.

The Interests of Famous People

Among the 50,000 SVIBs on file at Minnesota are those of many well-known people, distributed across the range of occupations covered by the SVIB. Many of these blanks were completed during the 1930's and they provide some fascinating information about the likes and dislikes of former leaders in various occupations. (For example, among the psychologist blanks, collected by E. K. Strong and Phillip Kriedt, are SVIBs for 48 of the past 68 presidents of the American Psychological Association, stretching back to Joseph Jastrow, the APA President in 1900.) A special file called "The Interest Archives" has been established. Here the SVIB profiles of prominent people will be filed for historical preservation.

The Interest Center is now contacting other individuals who should be represented in this file and asking them to fill in the Strong Blank. Many have already done so. Other psychologists who have access to SVIB scores (including their own) which they believe are currently or will some day be of historical interest are invited to deposit them with the Center. This, of course, should be done only with the individual's permission. There are ethical implications of such a collection, and we are being very careful to respect and protect the individual's privacy and dignity. No person is included without his permis-

sion. An explanatory pamphlet and release form are available from the Center.

Liberalism Versus Conservatism on the SVIB

One further study underway demonstrates the use of the SVIB with nonoccupational research problems. It is a project conducted by the author and Jack Rossmann to study the differences between the SVIB responses of liberal Democrats and conservative Republicans. Preliminary results indicate that it is possible to develop a valid (per cent overlap = 30%) and reliable scale of political "liberalism-conservatism" by contrasting these two groups. A more elaborate report will soon be available.

Toward the Future

What of the future? This is speculation and should be labeled as such. But it is speculation from a choice vantage point which affords an unusual opportunity to examine the past efforts of leaders in the field of interest measurement. Whether desirable or not, there are schisms in interest measurement research between application, technical methodology, and theory and such divisions are apparent in the comments which follow.

Applications

Strong, Clark and Kuder have demonstrated time and time again that interests can be measured and that the results are helpful in guidance situations. But there are still many unanswered questions about the use of their instruments. How should the results be presented? What scales should be included on the profile? Is the concept of "chance" scores meaningful? Since all interest inventories are fakeable, what is their place in the employment or selection procedure? How can profile patterns be handled more expeditiously? What is the proper place of subgroup scales, such as the different psychologist scales?

The use of interest inventories with women demands attention. There are very few data available on the developmental aspect of feminine interests. While Strong's work, along with that of Stordahl, Hoyt,

Powers and others, tells us a great deal about the age of crystallization of interests in males, there are no comparable data on women. The few available hints suggest that the onset of interest stability in women occurs later than in men. If true, this has major implications for the educational programs planned for women as well as for the guidance process.

Another neglected area in the measurement of women's interests concerns the woman who is feminine in other respects but lacks domestic interests. The very feminine woman who does not conform to the housewife and office worker response pattern has few places to score high on the Strong. There should be women's scales for occupations such as Fashion Illustrator, Interior Designer and Model. These should be helpful in guidance, surely more helpful than some of the "masculine" women's scales now used, such as Doctor, Lawyer, Dentist, Engineer, scales for occupations in which only insignificant numbers of women are engaged.

Technical Aspects

The next area for consideration is the technical area, that dealing mainly with psychometric procedures. Dramatic advances are likely here in the next decade. With computers and substantial research funds available, projects previously thought to be unfeasible will become commonplace. The work on the SVIB revision (Strong, *et al.*, 1964) in which eight criterion groups and a group of Men-In-General were scored on 20 different experimental keys, and Kuder's demonstration of the development of keys involving comparisons between all possible pairs of several occupations (Kuder, 1963), furnish hints of what is yet to come in data-handling techniques.

The development of high speed scoring services merits special comment. Several firms now offer "same-day" scoring services at prices around 75 cents per blank and running as low as 35 cents for volume scoring. (During the early days of the SVIB, Strong found it necessary to charge as much as \$2.00.) Some of these scoring services also make available statistical re-

sults such as means, standard deviations, intercorrelations and item counts on a routine basis. Such operations release the researcher from the clerical drudgery formerly necessary and free him for more creative work. At the same time, however, they remove him one step further from the observation process and deprive him of the "feel" of the raw data.

With these technical aids available, answers should be forthcoming to some troublesome methodological questions. How long should interest inventories be? What should be the length of individual scales? How can we best use the item intercorrelations to improve existing scales? What is a good index of profile similarity and how can it be used? What are the comparative merits of different methods of item weighting? Dozens of similar questions will occur to others working closely with psychometric data.

A Theoretical Structure

Interest measurement has come a long way without a theory. Someday, hopefully soon, someone will come forth with a theoretical framework for the structure that empiricism has built. It cannot be a theory for theory's sake alone; researchers in this area will have little patience with formulations that tell them less about the phenomena under study than they already know from looking at the data. What is needed is a new orientation that will provide some explanatory power for the peculiar puzzles of interest measurement. There *must* be some sizeable relation between interests and abilities, between interests and success, between interests and satisfaction. Why can we not seem to find them in the data?

And how can we deal with breadth of interest? This is probably one topic where research has been retarded by the particular form of current, well-developed interest inventories. There is no index of diversity of interest on any of these instruments. Is that why so little research has been done?

Lack of information on intensity of interest is another source of embarrassment. On the SVIB, an individual with a high

T score, say 75, on the Physician scale differs more from the average physician than the average physician differs from Men-In-General. Surely this is a peculiar situation and we do not yet know what it means.

Any framework that would provide fresh and efficacious ideas for solutions of these paradoxes would be welcome. Hopefully it can have the same elegant simplicity of the knowledge we already have. Men choose different occupations because they are interested in different things, and they persist in those occupations because their interests are stable. These are simple, powerful statements, well substantiated by E. K. Strong, Jr. Perhaps they are also theories. Whatever their classification, current research should seek to extend and elabor-

ate on them in order to explain the puzzles and embarrassments of interest measurement and its applications. The Center for Interest Measurement Research at Minnesota hopes to make some modest contributions toward these ends.

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Test Reviews

The Use of Tests in Research on Students of High Ability¹

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Since the founding of the National Merit Scholarship Corporation (NMSC) in 1955, the research staff has initiated a series of longitudinal studies of the winners and near-winners from each year's scholarship competition. These studies have given us an opportunity to try out a wide variety of tests and inventories, including several of the standard instruments and many experimental inventories. In this report I will attempt to summarize some of our experiences with the various tests. This is not intended to be a critical review of any particular test, since we have tended to use each device in a somewhat different way, and since there are still many possible uses of these devices that we have not yet fully explored. Instead, I will attempt to discuss some of the general conclusions we have reached regarding the relative usefulness of the standard paper-and-pencil inventories, various experimental inventories, and "tailor-made" devices. I will also attempt to discuss certain related issues in test development and scale construction, such as the type of item content used, the various techniques of item analysis and the role of criterion development.

Research with Tests at NMSC

The typical longitudinal study at NMSC begins with an assessment of Merit Scholars and Finalists (near-winners) during their senior year in high school. Since these groups are selected proportionately on a state-by-state basis, it is difficult to state precisely how selective the group actually is. Our best estimates indicate that 99 per cent of these students are among the top three per cent nationally in academic ability. To date we have performed studies on eight different samples of these very able students, ranging in size from about 1,000 students to about 9,000 students. (We have also recently initiated several longitudinal studies of average students, but the results discussed here will be based entirely on the studies of the high ability samples.)

Any tests or inventories to be administered are included initially as part of the assessment ma-

terials (questionnaires, etc.) which are mailed to the student during his senior year in high school. Retests are obtained by mailed follow-ups conducted during and after college. Scores on these tests have generally been used as possible predictors of the student's subsequent performance both in college and in his post-college vocation. In a few cases we have also used test scores as criterion measures (i.e., of personality development and change). So far we have administered the following standard inventories to various samples of students: the *Strong Vocational Interest Blank* (SVIB; Strong, 1943); the *Sixteen Personality Factor Questionnaire* (16PF; Cattell, Saunders, & Stice, 1957); and the *California Psychological Inventory* (CPI; Gough, 1957a). Among the experimental inventories which have been used are: the *Inventory of Personal Philosophy* (Barron, 1953a, 1953b, 1955); the *Holland Vocational Preference Inventory* (HVPI; Holland, 1958); the *Omni-bus Personality Inventory* (Webster & Heist, 1959); the *Myers-Briggs Type Indicator* (Stricker & Ross, 1962); the *Differential Reaction Schedule* (Gough, 1957b); and the *Inventory of Beliefs* (Stern, Stein, & Bloom, 1956). We have also administered a dozen or so other personality scales, including several special scales constructed by the staff of the Research Division.

One important consideration is that these various instruments have in all instances been administered by mail. All available evidence indicates that scores obtained by mail are at least as reliable as scores obtained either by individual testing in clinics or counseling centers or by proctored group testing. This conclusion is supported by two lines of evidence. First, mean scores on various validity scales (e.g., dissimulation, infrequency) tend to be lower and chance profiles less frequent than one would expect from data published in test manuals. Second, reliabilities as estimated by internal consistency analyses are comparable to those reported in the manuals. Recently, we have also obtained evidence of moderate test-retest reliability over relatively long intervals of time. For example, the median scales retest reliability coefficient for the 18 CPI scales over an interval of six years (1957-1963) was .53 in a sample of 495 boys; it was also .53 in a sample of 190 girls over the same period of time. These samples produced six-year test-retest co-

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efficients of .61 (boys) and .68 (girls) on the Stereotypy ("authoritarian") scale of the *Inventory of Beliefs*. Median test-retest reliability coefficients for samples of 432 boys and 204 girls on the scales of the 16PF test over a four-year interval (1958-1962) were .48 and .50 respectively. (The slightly lower reliability for the 16PF test over a somewhat shorter period of time may have resulted in part from the shorter length and greater statistical heterogeneity of these scales.) Over the same interval these latter two samples obtained median test-retest coefficients of .56 (boys) and .49 (girls) on the 12 scales of the HVPI. Since the manuals for these instruments do not report test-retest reliabilities for such long periods of time, it is not possible to compare these results directly with results obtained under other conditions. Nevertheless, in view of the low test-retest reliabilities traditionally obtained with personality inventories, these results suggest that satisfactory reliabilities can be obtained when such instruments are administered by mail.

A related consideration in the use of test data collected by mail is the sampling bias created by nonrespondents. Although the sampling problem has been one of the criticisms most frequently leveled at mailed questionnaire techniques, the type of bias which results from mailed surveys is probably similar to the bias introduced when the psychology professor requests volunteers for a study from his class in introductory psychology. A comparison of respondents and nonrespondents to our follow-up assessments indicates that the nonrespondent tends to be more psychopathic, to be less intelligent and to come from a lower socioeconomic level, than the respondent. These differences, however, are relatively small, and we have no indication that the relationships among variables are changed appreciably by this bias. Since it is these relationships with which we are primarily concerned, some sampling bias can be tolerated. When one is interested simply in estimating means or variances in the population surveyed, however, some correction for sampling bias would be necessary for many of the variables studied.

We have generally been able to get relatively high response rates in our mailed surveys. The rates of return vary from about 80 per cent to about 90 per cent, depending on how vigorous our follow-up is, and depending on the number of items and the kinds of items used. Tests containing ambiguous true-false items of the type used in most personality inventories are frequently criticized and even rejected by our students. By far the greatest number of objections we ever received came in response to the *Inventory of Beliefs*, which contains 100 clichés of the type found in the California "F" scale and similar inventories designed to measure authoritarian attitudes and beliefs. Students appear to be most favorable to relatively unambiguous items con-

cerning interests, hobbies and daily activities. We have obtained high rates of responses and practically no complaints using inventories containing more than 1,000 such items and requiring more than three hours to complete. Thus, the type of item and the apparent meaningfulness of the study seem to be more important determinants of the response rate to mailed surveys than does the total amount of material.

Predictive Validity

Most of the NMSC research on tests has been concerned with the prediction of undergraduate achievement. Since the ultimate goal of these predictive studies is to find or to develop useful measures of potential for achievement, the success of the studies depends greatly on the existence of appropriate criteria of achievement. Consequently, in addition to the traditional grade-point average, we have employed measures of extracurricular achievements in science, graphic arts, music, writing, leadership, speech and dramatic arts. For the most part these two- or three-point scales reflect socially significant accomplishments which have been accorded some sort of public recognition.

Academic Achievement

We have been able to identify significant predictors of academic achievement in college from practically all inventories, including both the standard and the experimental ones. However, the most successful of these instruments has probably been the *California Psychological Inventory*. The best CPI scales for predicting college grades (zero-order r 's in the high .10's and .20's) appear to be Ac, Fe, So, Sc and Sp (negative) (Holland & Astin, 1962). For predicting grades within individual colleges, So, Sc and Ac appear to be the most consistently valid of the CPI scales. The correlations of these three scales with freshman grades were in each case either significant or approaching significance in such diverse institutions as Radcliffe, California Institute of Technology, Harvard, Stanford, Princeton, MIT, Yale and Wellesley (Holland, 1959).

A somewhat unexpected finding is that predictions of academic achievement in college which are generally superior to the predictions obtained with personality inventory scales can be made using simple self-ratings on traits such as "scholarship," "drive to achieve," "persistence" and "perseverance" (Holland & Astin, 1962; Holland & Nichols, 1964; Nichols & Holland, 1963). Equally good predictions can be obtained by asking the student to indicate the average grade he expects to earn in college (Holland & Nichols, 1964). These simple self-ratings, it should be noted, rival the student's high school class rank in being the most efficient of all possible predictors of college grades in high ability samples (zero-order correlations tend to range between the high .20's and low .30's). In multiple regression equations, these

self-ratings sometimes receive larger weights than the high school class rank.

The economic lesson to be learned from these findings is clear: even though it is possible to predict academic achievement using elaborate and lengthy personality inventories, even better predictions are possible using a short list of simple self-ratings. One qualification is, of course, that the self-ratings be obtained in the context of a research study; if the same ratings were obtained under conditions where the subject believed that it would be to his advantage to present an unduly favorable picture of himself (e.g., an application blank), the validities of such items might be different.

An interesting sidelight in these studies of the prediction of academic achievement has been the relative ineffectiveness of measures of academic ability. The zero-order correlations of aptitude test scores with grades are frequently not significant (the highest r 's seldom go above the low .20's), and these measures sometimes do not even enter the multiple regression equations with greater than chance weights. Since our samples of Semifinalists are initially selected on the basis of academic ability, we earlier thought that these negative results were due largely to a severe "restriction of range." Recent evidence, however, suggests that the "restriction" is not as serious as one might expect. For example, on the Scholastic Aptitude Test (SAT) which is administered some months after the NMSQT, the Semifinalists typically obtain standard deviations between 50 and 60 on the Verbal scale and between 60 and 70 on the Mathematics scale (the standard deviation for the student population is set at 100). Furthermore, we have found that surprisingly accurate predictions of the aptitude tests on the Graduate Record Examination (GRE) taken by the students as seniors in college can be made with scores on the SAT taken four years earlier. In one study of 265 students (Nichols, 1964) the correlation between the SAT-Math and GRE-Quantitative was .76, and the correlation between the SAT-Verbal and the GRE-Verbal was .65. In a more recent study of 597 students (Astin, 1964a), the same correlations were .72 and .55, respectively. (The correlations with the SAT-Mathematical scale probably approximate the four-year test-retest reliability of this scale among unselected subjects.) These findings suggest that "restriction of range" is probably not a sufficient explanation of the low correlations obtained between academic ability and college grades, since reliable differences in tested ability were obtained in our samples. Perhaps, in the higher ranges of academic ability, other (non-intellective) factors are more important than aptitude in determining grades.

Extracurricular Achievements

Because of the variety of criteria studied and the diverse predictive methodologies employed, it is somewhat more difficult to summarize the

major implications from our studies of extracurricular achievement. There are a variety of true-false personality and interest scales which significantly predict extracurricular achievements in leadership, writing, dramatic art, graphic art and music (zero-order r 's range up to the high .20's). These predictors include selected scales from the SVIB, HVPI, CPI and 16PF, in addition to several experimental scales developed to assess originality, dominance, extraversion and related traits (Barron, 1953a; Budner, 1955; Gough, 1957b; Holland & Astin, 1962; Nichols & Holland, 1963; Rokeach, 1956; Stricker & Ross, 1962; Torrance & Ziller, 1957). Scientific achievement (performing original research, winning research grants, etc.), however, is mainly related just to selected scales from the tests with occupational content (the Realistic scale from the HVPI, in particular).

As was the case with academic achievement, simple self-ratings appear in general to be as effective in predicting extracurricular achievements as are these elaborate and expensive inventories. The student's self-rating on "originality" is significantly predictive of extracurricular achievements in practically all areas (leadership, writing, art and science); self-ratings on "expressiveness" and "leadership" are significantly predictive of achievements in all areas except science. Other self-ratings which appear to be useful in predicting extracurricular achievements are "popularity," "independence," "self-understanding" and "aggressiveness."

It is to be expected that one of the best predictors of any given extracurricular achievement in college would be performance of a comparable type of achievement during high school. Although this tends to be true with most extracurricular achievements, the superiority of these high school achievements over personality and interest measures is not always as clear in the prediction of extracurricular achievements as in the prediction of academic achievement. Perhaps the requirements for achievement in high school and the requirements for achievement in college are more similar in the case of academic achievement than in the case of extracurricular achievement.

One very promising alternative to the use of true-false personality and interest inventories for the prediction of college achievement has been the use of measures of "achievement potential" (Holland & Nichols, 1964). These measures were developed using a variation of a well-known (but frequently overlooked) technique: empirical keying of items directly against a criterion. In these analyses the criteria consisted of various measures of extracurricular achievements in high school. Concurrent item analyses were carried out using a large pool of items about hobbies, interests and daily activities. The most discriminating items for a given criterion were then combined to form an "achievement potential" scale for that criterion. Subsequent prediction of college achievement with

these potential scales (using a new sample of students) yielded zero-order correlations ranging as high as the .50's. In some instances the "potential" scale turned out to be a better predictor of college achievement than the high school achievement scale which served as the criterion in the item analysis. It is probable that such "potential" scales would prove to be even more successful predictively if we were to employ one of the more sophisticated techniques of item analysis. It has been shown (e.g., Clark, 1961) that a considerable increase in validity can be obtained if the factorial composition of the item pool is taken into account in selecting items for the scale.

The apparent success of the "achievement potential" scales in predicting college achievement suggests that the technique of empirical keying should be exploited more fully in test construction. The particular method of analysis employed in the recent NMSC study (Holland & Nichols, 1964) overcomes to some extent the problem of "waiting" until the subjects have actually performed in the situation to be predicted. That is, the "criterion" used for scale construction (i.e., the high school achievement) was actually a kind of "pre-test" which was available at the time the prediction was to be made. It would be important to determine if other types of performance criteria can be successfully predicted with scales developed in this manner.

Tests of academic ability are virtually of no use for predicting extracurricular achievements in our samples of students of high ability. Correlations are typically not statistically significant, and those that are seldom range higher than the .10's. The most consistent significant relationships obtained between tests of academic ability and extracurricular achievements in college are, in fact, negative ones (with artistic achievement and leadership achievement).

Use of Tests as Criteria

One limitation of our measures of academic and extracurricular achievement is that they provide practically no information about the student's personality development during the college years. Consequently, in a few recent studies (Astin, 1964b; Nichols, 1963) we have also employed two of the standard inventories (16PF and CPI) and two experimental inventories (IIVPI and the *Inventory of Beliefs*) as criteria of personality development. Our approach in these studies is to administer the inventory prior to the student's entering college and again at the time of graduation from college. Residual final scores are obtained by regressing the final scores on all pre-college data (initial scores plus any other available data which are predictive of final scores). Finally, these residual final scores are related to the characteristics of the student's college and to other undergraduate experiences in order to isolate factors which influence personality development during the college years.

Although we have isolated a variety of environmental "effects" on test scores, the magnitude of the effects has tended to be small. Thus, most of the variance which we can account for in final scores is attributed to the pre-college data. A major problem exists, however, in the interpretation of these findings. For example, in one study (Astin, 1964b) we have found that having psychotherapy during the college years tends to lower scores significantly on the majority of scales of the CPI (the trend is more pronounced among boys than among girls). If we accept the interpretation of the overall CPI profile as given in the manual, we are forced to conclude that psychotherapy tends to have a negative effect on the "social and intellectual functioning" of the very able college student. However, in discussions of these findings with some of my practitioner colleagues, an alternative interpretation has developed: perhaps psychotherapy tends to make the bright student more self-critical, and the lowered CPI scales thus reflect increased insight into his own limitations and deficiencies. Although the two interpretations may not be completely incompatible, they do illustrate a fundamental question which arises in the use of true-false personality inventory scales as criteria of personal adjustment or personality integration: what constitutes a desirable or "healthy" change? Notice from the psychotherapy study example that while the test manual explicitly defines "effective" psychological functioning in terms of high scale scores, the nature of the test is such that one can completely invert this interpretation to accommodate an otherwise unacceptable finding. The point is simply this: since the adequacy of any criterion measure depends on the degree to which its importance or social relevance can be judged solely on the basis of its content (Astin, in press), most true-false personality inventories would seem to be less-than-adequate criteria.

Summary

This review reports some of our findings and impressions resulting from the use of various tests in research on students of high ability. Although there are still many research problems that have not yet been fully explored, our experience so far seems to warrant the following tentative conclusions:

1. Although the collection of test data by mail is frequently viewed as a questionable procedure, scores obtained by this technique appear to be at least as reliable as scores obtained under other conditions.

2. Items concerning the student's hobbies, interests, life history and daily activities appear to be much more acceptable to students than ambiguous true-false items of the type typically found in personality inventories. We are currently attempting to assess the relative validity of these two types of items for assessing personality characteristics.

3. Scores on tests of academic ability are of little value in predicting either the academic or the extracurricular achievements of Merit Finalists in college. Several other lines of evidence suggest these negative findings are not attributable solely to a "restriction of range" on academic ability.

4. It is possible to predict both academic and extracurricular achievement in college from selected scores on the standard personality inventories and also from scores on a variety of experimental personality inventories. Equally accurate predictions can be made, however, from a simple checklist of self-ratings. The most accurate predictions of college achievement are obtained from measures of comparable high school achievements and from empirically-keyed scales containing items about the student's interests, hobbies and daily activities.

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Comments and Letters

A Note on Self-Ideal Discrepancy and Self-Acceptance

In many studies, self-ideal discrepancy or some derivative thereof is used as a measure of self-acceptance. Such a practice violates the logic of the concept of self-acceptance as it is used in theory and in clinical practice.

In Rogers' formulation (1951), self-acceptance implies a state in which *all* aspects of experience are accepted as part of the self. Within a different theoretical framework Clara Thompson states, "When the 'good me' tends to deny responsibility for 'bad me's' activities . . . 'bad me' ceases to function openly, or to be recognized as part of the self" (1958, p. 9).

In practice, as well as in theory, self-acceptance refers to the ability to admit or claim as part of the self *both* approved and disapproved behaviors without distortion or depersonalization.

Self-ideal discrepancy can, at best, index but one portion of self-acceptance—the degree to which approved behaviors are claimed—and even here it is equivocal in meaning.

Butler and Haigh (1954) were aware of these limitations: they labeled their measure one of self-esteem (self-approval), and they recognized that, thus measured, high esteem could not be distinguished from high defensiveness.

Three empirical studies are cited below to illustrate problems associated with the use of SI discrepancy as a measure of self-acceptance.

Because of the nature of the relationship of two measures of self-acceptance to each other and to other variables, Winkler and Myers (1963) had to question the construct validity of the measures, one of which was SI discrepancy.

Pilisuk (1963), in order to interpret his results, had to suggest two types of self-acceptance: one achieved by denial of unpleasantness; the other, by reasonable aspirations.

Veldman and Worchel (1961) had to differentiate the self-acceptance indicated by a non-defensive low SI discrepancy and the facade of self-acceptance indicated by a defensive low SI discrepancy, SI discrepancy itself offering no discrimination.

The implicit equating of SI discrepancy and self-acceptance may be dismissed as a convention,

a convenient label. However, a clear-cut recognition that SI discrepancy and self-acceptance are not equivalents might do much to clarify the relationship between data and theory. It could also lead to a better measure of self-acceptance.

One possible direct measure is that of clinical rating. A more specific direct measure would be a set of statements based on tabulated observations describing S's characteristic behaviors against which would be measured S's implicit or explicit avowal of these characteristics.

More feasible, perhaps, is the development of an indirect measure which indexes the opposite of self-acceptance, i.e., defensiveness.

Although *K* of the MMPI has frequently been used as a measure of defensiveness, its relationship with low SI discrepancy (Block & Thomas, 1955; Zuckerman & Monashkin, 1957), and its variability of meaning in different populations (Heilbrun, 1961) indicate its limitations when used alone. The measures used to identify repressors and sensitizers (Altrocchi, Parsons, & Dickoff, 1960) offer somewhat more effective and inclusive indices of defensiveness than *K* used alone. A very interesting possibility is The Defense Mechanism Test described by Kragh (1962) which permits coding of five specific mechanisms.

Whatever measure be devised, checking it against clinical ratings of self-acceptance could help define its meaning.

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Predicting Success on a Psychiatric Rehabilitation Program¹

Member-Employee Programs (1953) have recently been superseded in Veterans Administration Hospitals by a variety of patient-employee programs. The patient-employee program now in effect at the Brockton VA-NP Hospital employs different, more liberal selection standards than the original Member-Employee Program. However, it continues the former incentives of money and separate independent residence.

The establishment of criteria which are predictive of success on such programs is a continuing activity among many psychologists. One focus of attention is prediction of outcome based on selected biographical data, particularly that reflecting difficulty with alcohol and/or with the police (Stotsky, 1955).

The present study was designed to determine the relationship between a history of alcoholic involvement, non-psychiatric arrests, and rehabilitation outcomes for NP patients transferred to the current patient-employee program at the Brockton VA Hospital. The sample consisted of 110 patients assigned within a 24-month period to the ongoing program for whom outcome data were available. Results are set forth in Table 1.

Of the two predictor variables tested, that concerned with a patient's history of non-psychiatric arrests differentiated the successful from the unsuccessful patient-employees. Examination of the 27 failures on the program indicated that over-indulgence in alcohol and exacerbation of symptoms accounted equally for the unsuccessful outcomes.

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Stotsky, B. A. Predicting success on the member-employee rehabilitation program. *J. consult. Psychol.*, 1955, **19**, 274.

¹An extended report of this study may be obtained without charge from James F. McCourt, Veterans Administration Hospital, Brockton, Massachusetts 02401.

Table 1
Comparison of Successful and Unsuccessful Patient-Employees for Clinical Variables

Variable	Successful		Unsuccessful		Chi Sq.	p
	Yes	No	Yes	No		
Hist. of alc. involvement	41	42	14	13	.049	—
Non-psychiatric arrests	9	74	14	13	20.686	.001

from Ephemera

You sit across the room
And whether we idly chat
or curse man's condition
something inside me
begs to reach out to you,
to touch you.

But they have taught us well.
If love is more than concept
then only lovers
are allowed to love.

Well, here I am again.
Even my most timid ventures
leave me sitting here
watching the proverbial ball bounce.

I'm still trying to figure
the connection between

self theory and Song of Myself
clinical judgment and megaton bombs
scientific method and Brahms 1st
chi square and human suffering.

What's the subject matter, anyway,
human behavior or the soul of man?

But I want to be vulnerable!
My pleasures lie in
living.

My not-knowing
is as much a conviction
as your answers.

I coax you to feel
the exciting freedom
of the open search

and in doing so
contradict my conviction.

Do you think
because I shed a tear
my *jote de vivre*
is less than yours?

When I feel your aloneness
I say careful things
to hide my concern.
And you are careful back.

We emphasize the
separateness
of being a person.

Yet alone in my room
I am not afraid of your hurt.
I cry with you
and feel your pain.

I wonder if in your room
you do the same.
Maybe the separateness
is the real illusion.

Sprinkled magic, frenzied dance,
mist, rattles, chants.
Science, dignity, cognitions,
diagnostic suppositions.

Incantations or interpretations—
what's the difference?

I weep for you
for me
for them—
it's all the same.

They read my tears
with X-ray eyes
perceptions turned to
Truth.

Sure that bitter
is the only taste of tears.

They who advertise
their virtues,
whose Holy Grail is
governments grants.

They who never ached
of love
nor cried real tears
for Man.

But you whose eyes
ask questions
you who weep with me,
only you understand.

Joann Chenault
University of Pittsburgh

To the Editor:

In the Summer, 1964, issue of this *Journal*, Bixenstein and Page reported a case of a female college student who asked for elimination of an annoying motoric habit which "consisted of movement of the upper body at early morning hours so vigorous as to awaken her dormitory roommates."

It was hypothesized that the symptom manifested a conflict between a mature tendency to get up and finish work she had slighted and an immature tendency to avoid her work by continuing to sleep. Hypnotic suggestion was given to her that subsequently whenever the head movement began to occur she would immediately waken and engage in her unfinished work with fresh enthusiasm. The authors report that after this suggestion the behavior disappeared, the client showing the new and welcome behavior of awakening early full of energy. The main point the authors make of this case is that the symptom was not something bad to be removed but "an index of personal strength and a resource for change." That is, the girl's head shaking was a means by which the mature part of the girl's character protested against its thwarting by her immature slighting of responsibility.

From the standpoint of learning principles the treatment involved nothing fundamentally different from removal of symptoms by behavior therapy techniques. The treatment evidently strengthened one of two behaviors whose conflict, according to the authors' own hypothesis, was manifested in the symptom. The response of getting up was strengthened so that it became prepotent over the response of continuing sleeping and no longer became engaged in the vacillating struggle manifested in the head shaking. Such symptom removal is essentially similar to behavior therapy techniques that eliminate symptomatic manifestation of conflict by strengthening one component of the

conflict relative to the other. For example, treatment of conflict over self-assertion by Wolpe's assertion technique involves the strengthening of assertive responses relative to the avoidance of assertion. Prior to this modification, the symptom may often be said to consist of vacillative behavior essentially similar to the head shaking symptom discussed above. The vacillative behavior, like the head shaking, could be regarded as a protest by the mature, assertive aspect of the patient's character against the immature avoidance of self-assertion.

It seems clear that the only aspect of the head shaking symptom which Bixenstein and Page really considered desirable was the mature response component manifested in it. But they clearly considered the non-symptomatic expression of this component, which they produced by their therapy, as preferable to the symptomatic manifestation. Similarly, in the elimination of a symptom manifesting conflict over self-assertion, the behavior therapist and the patient, as well, consider the assertive component of the conflict desirable but eliminate the symptom to allow the assertive component unthwarted expression.

What has been said of the way symptoms are regarded by behavior therapy actually seems generalizable to most other types of therapy. Most therapies conceptualize symptoms as undesirable but not all the components of behavior involved in them. A symptom is generally viewed as a conflict between some desirable behavioral tendency and undesirable inhibition of it. In fact, it is largely because the one behavioral component is desirable that its inhibition by the other component is usually considered neurotic, as opposed to appropriate self-control.

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Manuscripts Accepted for Publication

Recommended Curricular Change and Scholastic Performance. Edmond Marks, Jefferson D. Ashby and Martin L. Zeigler, The Pennsylvania State University. 2-17-64.

Conditioning of Work Oriented and Work Aversive Statements of Neuropsychiatric Patients. Andrew Thompson, Veterans Administration Hospital, Palo Alto, California. 3-9-64.

The Minnesota Counseling Inventory and Persistence in an Institute of Technology. Donovan J. Watley, University of Minnesota. 3-23-64.

An Equissection Scale of Interests: A Preliminary Report. Royce R. Ronning, Lawrence H. Stewart, University of California, Berkeley and Walter R. Stellwagen, Michigan State University. 4-15-64.

"Counseling Readiness": A Treatment Specific or General Factor? Alfred B. Heilbrun, Jr., State University of Iowa. 4-20-64.

Supervision: Learning, Not Counseling. Dugald S. Arbuckle, Boston University. 5-11-64.

The Counseling Function as Seen by Students, Parents, and Teachers. Philip A. Perrone, Mary L. Weiking and Elwyn H. Nagel, University of Wisconsin. 5-13-64.

A Comparison of the Effectiveness of Verbal Reinforcement Applied in Group and Individual Interviews. D. D. Cahoon, Veterans Administration Hospital, St. Cloud, Minnesota. 5-18-64.

Beyond the Conventional Career: Some Speculations. Rhee Lyon, Northwestern University. 6-5-64.

Selective Perception and Staff Consensus in the Viewing of Psychiatric Patients—A Brief. Stephan P. Spitzer, State University of Iowa and Raymond Sobel, University of Washington. 7-9-64.

Book Reviews

Comments on Current Books and the Passing Scene

C. Gilbert Wrenn

Arizona State University

The past few months have witnessed two great national political spectacles—conventions they are called—each master-minded by one man, each showing about as much evidence of responsiveness to the feelings and thoughts of the people of this country as might be seen in a nice tight little dictatorship.

By the time these words appear in print, the national elections will also be history. Whichever party will have won, I will fear far less for our country than will the political opponents of that party. For a president and his party in Congress cannot "mold" the country to his taste. He can only accelerate or retard the evolution of economic and social changes that will be taking place in spite of the party. So my political fears are therefore not intense, even though I have contributed to the coffers of the party of my choice.

The wave of violence of the past few months is another matter. To resist change or to bring about change through violence to the dignities or bodies of others is psychological and social regression of a serious order.

I have just completed a chapter for *Counseling, A Growing Profession* (John W. Loughary, editor for this publication of the American Personnel and Guidance Association). It is "a second look" at the projections written in 1960 for *The Counselor in a Changing World*. As I reflected in 1964 on my 1960 ideas, it was apparent that I had not been imaginative enough on technological developments, but had been too optimistic regarding the projected speed of social innovation and change. I failed to allow sufficiently for the time element involved in the social principle that frequently "things must get worse before they get better." Nor had I anticipated the intensity of physical and intellectual violence as a protest of change. In particular: social innovation has not produced jobs rapidly enough to care for those displaced by automation and other technological changes; the family is adjusting at a slow pace to the demands made upon it in the light of the greater freedom of action available to children and the impersonalized, mobile nature of urban life; the projected increase in Gross National Product and therefore in family income is resulting in an increase of the gap between those who have much and those who have little. The plight of the 35,000,000 in poverty-level families will get

worse in comparison with those whose families will provide the 1960-1970 kind of education needed for their children.

And there will be more violence. This means violence and an attitude of disregard for the rights of others on the part of young people who are faced with what seems to them to be an unrealistic school program, vocational uncertainty, and adult unsureness in the declaration of firm values. Attempts to hasten the pace in the change of attitudes toward racial and color-line differences is being accompanied by more violence than was anticipated—also a pitifully inadequate usage by both sides of common-knowledge psychology. It is apparent that status quo with all of its attendant injustices is more acceptable to some and more resented by others than students of the situation had realized. There is an intense resistance to any acceleration of the evolutionary nature of the movement toward more federal concern with quality of education and social health at local levels, resistance accompanied by violence of an intellectual sort—name calling (on both sides, of course), loud denial of present realities, invocation of the Bible regarding conditions not dreamed of by the writers of the Bible, invocation of the Constitution under the same conditions—or denial of it if the occasion demands. Only one side has as yet brought in the Bible, but give the other side time!

What has the profession of psychology done to curb this atavistic wave of violence? The APA program in Los Angeles did not demonstrate much concern. Irwin Berg thinks that psychology should—in a daring and hard-hitting paper entitled "Cultural Trends and the Task of Psychology." Write him for a copy.

Counseling has done well of recent months, and is securing an almost embarrassing amount of attention in national legislation: the 1964 amendments to the Manpower Development and Training Act and the National Defense Education Act, the Vocational Education Act, the Economic Opportunity Act (Anti-poverty Bill) with its youth opportunity centers, work-training camps, etc.—all calling for and supporting counselors, from elementary school through junior college, from school out into the world of the disadvantaged and the unemployed. Are we equal to the occasion? Certainly not in terms of numbers. Nor is the

school and university counselor prepared for these intrusions into kinds of social realities which are not a part of his academic *Zeitgeist*. Yet 22,000 people, many of them school people, took the examinations for entrance into the College and University Summer Education program (CAUSE) designed as the initial step in the preparation of Counselor Aides for the projected Youth Opportunity Centers. The spirit of adventure and altruism is not dead—as the Peace Corps program has proved.

The total demand for additional counselors of various levels of proficiency is staggering. It was estimated last spring in the President's Report to Congress on Manpower that 32,000 additional would be needed in the next four years. This estimate will be increased by the 1964 NDEA Amendments which now bring elementary school and junior college counselors under the wings of subsidy. Yet the initiation of new programs is slow—the machinery creaks. Of the 1800 plus who have completed the 27 university CAUSE programs, only 800 have been employed by early fall, in part because of the late passage of the legislation; in part because the Counselor Aides are to be employed by the various state employment agencies which administer the Centers. And there are 50 systems of employment and operation.

The profession of counseling psychology advanced a step or two when the Division of Counseling Psychology of APA decided to plan and subsidize a basic conference on the preparation of counseling psychologists. The conference held last January at the Greyston Conference Center of Teachers College, Columbia University provided this landmark. *The Professional Preparation of Counseling Psychologists: Report of the 1964 Greyston Conference* (Albert S. Thompson and Donald E. Super, Eds. Bureau of Publications, Teachers College, New York City, 1964), a neat volume of 165 pages, has been given Division 17 distribution and is available generally. The book will be reviewed more fully in a later issue.

A cluster of recent books deal with the topic of work and the associated concepts of employment: *Work and Motivation*, by Victor H. Vroom (John Wiley and Sons, New York, 1964); *Man in Education and Work*, by Grant Venn (American Council on Education, Washington, D.C., 1964); *Employment and Unemployment in the United States*, by Seymour Wolfbein (Science Research Associates, Chicago, 1964); *Economic Growth and Employment Opportunities for Minorities*, by Dale L. Hiestand (Columbia University Press, New York, 1964); and *An Introduction to Employment Service Counseling*, by John McGowan and Thomas L. Porter (The University of Missouri, Columbia, Missouri, 1964).

Vroom's book provides a satisfyingly thorough treatment of the topics of occupational choice,

job satisfaction and job behavior, and motivation in work performance. The 50-page chapter on occupational choice is a small volume in itself, based on well over 100 references, but logically analyzed and with the author's conclusions standing clearly above the citation of studies. The same is true of the 75-page chapter on job satisfaction, and the 80 pages devoted to work motivation. The author is theoretical and systematic in his approach. The cognitive model is established in Chapter 1 and the book marshalls the empirical evidence to test the author's propositions. So thorough and so clear a book will be in solid use for some years to come.

Venn's smaller volume has one chapter on work as it relates to education, but is essentially a treatment of vocational and technical education in this country, its history and present status, the various national legislative acts affecting it. It goes further to analyze the social issues affecting vocational and technical education and makes 15 recommendations for the most effective development of this field of education. It is in a sense a biased book, highly favorable to the vocational and technical aspects of education. It proposes that higher education as well as schools prepare men and women for occupations of less-than-baccalaureate level, that colleges should provide post-high school vocational education where junior colleges do not exist, that junior colleges should devote a major part of their program to vocational and technical education, etc. All of this is well within present economic and vocational trends, but some of it will go hard with those biased in the opposite direction. The style is clear, the arguments cogent.

The other three volumes in this group deserve more attention than can be given here. Hiestand's careful analysis of minority groups in the labor force means Negroes almost entirely. It is a special case of the more comprehensive unemployment trends analyzed by Wolfbein. While Negroes were employed in greater proportion than whites during the 40's and 50's, and while their income levels have improved, to be remembered is that in the expanding occupations there were few Negroes to begin with, and if technological change means a decrease in jobs in a given vocation, the Negro will suffer more than the white. Wolfbein's treatment of employment and unemployment is authoritative in part because it is written by a man who probably knows more on his subject than anyone else in the country. The several factors that contribute to a projection of the employment pattern of the future are skillfully handled, and the unemployment of the future stands out clearly (at least to me!).

McGowan and Porter have made an important contribution to the professionalization of employment counseling. Knowing both professional counseling theory and the operational side of employment counseling, the authors discuss theory and

process in terms that are meaningful to the employment counselor (and to many vocational counselors). Their clear and concise chapters on "Psychological Aspects of Work and the Worker" and "Counseling: Definitions and Theories" would be valuable to any counselor and in any counseling course. The authors introduce the reader to a "this we believe" about client, counselor and process before discussing theories and processes. This advance notice of understandable bias should be required treatment for all authors in the field!

Of the small batch of books on guidance in the schools, *Guidance in American Education: Backgrounds and Prospects*, edited by Edward Landy and Paul A. Perry (Harvard University Press, Cambridge, Mass., 1964), stands out. It contains some very basic and scholarly papers. The administrators of pupil personnel service for whom this Summer Institute was held, were exposed to a fare of ideas that would do justice to any professional group. The opening section of the book deals quite appropriately with the humanistic foundations and political and economic realities of the school guidance function. The significance of what is said by philosopher Israel Scheffler on "containing" the counter-revolution which returns us to formalism and essentialism in our schools is matched by economist and human conservationist Eli Ginzberg, who writes on the manner in which our changing economy and vocational world sets new tasks for the counselor. These two chapters seem so pertinent to our day and are so engagingly presented that the reviewer wants to say, "All counselors must read! It is vital that you do!" So it goes for sections on contributions from learning theories, from personality theories, from the changing curriculum—each chapter well written by carefully chosen people. The concluding section on "Guidance Today and in the Future" with chapters by Donald E. Super and David V. Tiedeman provide a fitting climax to a significant volume. As the book becomes known, I predict that it will have extensive use.

Another book that should have a good future is *Counseling: Content and Process*, by Daniel W. Fullmer and Harold W. Bernard (Science Research Associates, Chicago, 1964). It focuses on both student and society as dynamic realities, gives much creative attention to the family group consultation and to group work in schools as well to counseling, the counselor, and the adolescent. The book is characterized by a number of innovations such as those proposed for the evaluation of counseling, by selective attention to the literature of the field, and by a freshness of treatment of familiar topics. If I were a student using this book, I would come away feeling that there was something both substantial and attractive in the mission and functioning of counseling.

These additional books dealing with school guidance can only be mentioned:

Decisions and Values: A Rationale for Secondary School Guidance, by Martin Katz (College

Entrance Examination Board, Princeton, New Jersey, 1963), a concise monograph proposing two major choice points for vocational choice, grades 8-9 and 11-12, and what is to be done each time.

A New Design for High School Education, by Robert N. Bush and Dwight W. Allen (McGraw-Hill Book Co., New York, 1964), a very modern treatment of the computerized organization and scheduling of a high school, with a chapter (7) on guidance, which distinguishes clearly between the role of a school counselor and that of a teacher-adviser as the latter serves on advisement teams and with guidance groups.

The Role of the Teacher in the Guidance Program, by Roy D. Willey and Mervin Dunn (McKnight and McKnight, Bloomington, Illinois, 1964), a book which has much of value in it but which is oriented to status quo rather than to an evolving future and which does not clarify the distinctiveness and the overlap between teaching and counseling.

Thumbnail Sketches

Three 1964 studies are reported by the National Education Association Project on School Dropouts (NEA, 1201 16th Street, N.W., Washington, D.C.), with Daniel Schreiber editor of the first two and author of the last: *The School Dropout* reports a symposium of economists, sociologists, educational writers, psychologists, educators, chaired by Ralph W. Tyler, and with a chapter on "The Dropout and the School Counselor" by your reviewer; *Guidance and the School Dropout*, a similar interdisciplinary symposium, chaired by your reviewer, with chapters on school conditions, guidance programs, counseling and counselor education as these affect the potential dropout; *Holding Power of Large City School Systems* indicates that the 128 largest cities have holding power from 10th grade to graduation of 70.8 per cent, five points lower than national average, provides much data on free textbooks, transportation, and types of high schools, as these may affect the dropout.

An additional monograph on the subject, *The Dropout and Social Concern*, by Calvin J. Daane and Beaumont R. Hagebak (Bureau of Educational Research and Services, Arizona State University, 1964), provides an excellent analysis of trends in the literature of each decade since 1914 and an annotated bibliography of 228 items.

Ashley Montagu, *The Humanization of Man* (Grove Press, New York, 1964—first copyright in 1962), offers delightfully as well as authoritatively written chapters on "Changing Conceptions of Human Nature," "Culture and Mental Illness," "A Scientist Looks at Love," "Value Determinants and Conflicts in Today's Family," "The American Woman," "Selling America Short," "The Negroes' Problem: The White Man"—28 such chapters by a distinguished anthropologist.

The Modes and Morals of Psychotherapy, by Perry London (Holt, Rinehart and Winston, New York, 1964), is a book of scholarly quality which

analyzes "insight therapists" and "action therapists" in relation both to mode of operation and assumption of moral responsibility. It gives a thorough analysis of such leading but dissimilar figures as Wolpe, Stampfl, Skinner, and Mowrer with a detailed commentary, citing literature and defining terms, for each of the five chapters of the book. Engrossing reading.

A quite different psychotherapy approach is *Psychotherapy: the Purchase of Friendship*, by William Schofield (Prentice Hall, New York, 1964). This is a scholarly debunking of the assumption that there is a critical gap between demand and supply of psychotherapists, that all "neurotics" need professional help, that only the elite may enter into a relationship which may be truly therapeutic. Careless assumptions about "mental health" and the numbers involved are incisively treated. Some people desperately need psychiatrists or other therapists—those in hospitals, for example—but many can be helped by means of an informed friendship. Is psychotherapy merely a purchased friendship? Only an established and respected psychologist like Schofield could attack such sacred cows and live to tell the story. This author wrote at times with a hidden smile and a sense of enjoyment, I'll warrant! Listen to these Schofieldians: "multitudes of the miserable," "monotonous melancholy," "empty euphoria," "numberology, nosology, and nonsense," "absurd assumptions, asinine arithmetic, and cock-eyed conclusions," "semantic slipperiness," etc. Thanks, Bill.

Aaron V. Cicourel & John I. Kitsuse. *The Educational Decision-makers*. New York: The Bobbs-Merrill Co., Inc., 1963.

This book may be a difficult-to-swallow remedy for counselors who persistently neglect the social and cultural determinants of behavior. It may be, however, that a bitter pill is what we need to help jolt us away from the psychological bias so predominant among counselors. No one will deny that psychological insights are important—even essential—in the task of unraveling the mysteries of human behavior. Yet when a true science of behavior is developed it will undoubtedly dispense with the present imposed boundaries of psychology, sociology, anthropology as well as biology and chemistry.

The usual approach to the question of selection and differentiation of people (students, hospital patients, clients, etc.) is to examine the characteristics of accepted, admitted, or improved people and note how they differ from people who are omitted or not improved. The more obvious explanations of selection (IQ, grades) have proved to be inadequate. Recent trends have focused upon non-intellective factors of cultural, social and motivational origin.

This book presents an alternative approach. The distribution of students into categories is

seen as a function of the administrative organization of the institution rather than the result of characteristics of the individuals. For example, consider the following: "The theoretical significance of student behavior . . . is dependent upon how the personnel of the high school interpret, type and process the behavior" (p. 9). Thus the rates of college-going students, underachievers, "academic problems," students with personal problems, and so forth, are considered to be results of the institutional policy and practice, not of any stable behavioral tendencies of individuals. In short, the counselors (as well as administrators) make the problems. The authors claim that ". . . the bureaucratized and professionalized counseling system may provide adolescents with the motivations, the labels, and the justifications for a wide range of 'problems'" (p. 109). This kind of statement you will not find in a text on counseling procedures!

Can it be, as these authors maintain, that the "problems" of young people are located, not in their "life space" as such, but in the bureaucracy of the institution? Can it be that the sources of academic problems lie not in academic activity, but within the organization and methods of the school system? In the attempts of counselors to "get at the problem" is it possible that clients become aware of the desirability of having a problem in order to account for and explain away their behavior and consequently select some sort of problem with its attendant label in order to satisfy the "seeker of the problem"? Heresy? It is a major thesis of this book.

The institutional setting for the research reported is the high school. It could as easily have been a clinic or a university counseling bureau. The authors are primarily concerned with the relationship between an institution and the ways in which people are processed through it. In this case, the counselor is seen as a crucial agent of student passage through the school. The process of differentiation of students, primarily a counselor function, is considered to be a consequence of the administrative organizations and decisions and not a result of student behavior per se.

The implications of this organizational interpretation are profound. It follows that the prevailing norms and attitudes at any institution where counseling is carried on are major determinants in any process of classification. Perhaps here is a crucial key to the question of diagnosis in counseling.

The "counselor-as-problem" approach of this book is considered to be a part of the process of professionalization. The current crisis in education—"the identification and encouragement of talent"—has given impetus to the on-going professionalization and subsequent bureaucratization of the counseling office. To the counselor was given the organizational task of monitoring the progress of students. This increased importance in

status has contributed to the professionalization of counseling underway since World War II. The results of professionalization—incomplete as it may be—have been an increasing alienation of counselors from teachers and teaching, and a need to “carve out” a suitable niche in which to function. This carving up of the territory has brought the counselor into conflict with other professions—social work, clinical psychology, psychiatry—and has led to a compromise: counselors take “surface” (role, environmental) problems; clinicians take “deep” (personality) roles. This emphasis upon problems, conclude the authors, has contributed greatly to the institutional control of the definition of student difficulties. For example, the authors demonstrate that the more prepared (professional) the counselor, the more student problems he will uncover. Now, are the problems really “there,” brought to light by the counselor’s skill and understanding, or are the problems merely institutional labels selected either by the counselor or student?

The position of the book is extreme and there are obvious weaknesses. The authors demonstrate little understanding of theoretical issues in counseling. The data are woefully inadequate to support the inferences made. Only one school was studied, and it was admittedly atypical. Interview

data were cited from only four counselors (two professional, two “non-professional”) and the whole case for the effects of professionalization was built upon this testimony.

Yet the weaknesses have been downplayed in this review because there remains much of value. The first chapter, “The School as a Mechanism of Social Differentiation” and the fourth, “The Bureaucratization of the Counseling System” are especially recommended. The issues raised are vital; the data collected to support the issues are inadequate. Yet the issues remain.

Finally, it takes a book like this to demonstrate how significant has been the failure of counselors to transmit the image they profess. If what is reported here is counseling, then I for one want no part of it. This book lets us see ourselves as others see us, always a painful process. We will, undoubtedly, disagree with this particular image, but we should be aware of it and consider how to change it.

Joseph C. Bentley
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(Due to space needs for the Index a list of “Books Received” is being held over to the next issue.)

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